OMB Number: 2030-0020
Expiration Date: 06/30/2024

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name: Socially Responsible Agriculture Project

Address: 2093 Philadelphia Pike #4133

City: Claymont

State: DE: Delaware Zip Code: 19703

B. DUNS No. 118594624

II. Is the applicant currently receiving EPA Assistance? ☐ Yes ☒ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R 5.140 and 7.95)	☒ Yes	☐ No
a. Do the methods of notice accommodate those with impaired vision or hearing?	☒ Yes	☐ No
b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?	☒ Yes	☐ No
c. Does the notice identify a designated civil rights coordinator?	☒ Yes	☐ No
VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))	☒ Yes	☐ No
IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)	☒ Yes	☐ No

X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

Katie Engleman, Operations and HR Director. 2091 Philadephia Pike, #413, Claymont, DE 19709. katiee@srapproject.org. Phone - 503-362-8303

XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.

Yes

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Robyn Hill	Development Manager	03/24/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statures and EPA regulations.

A. *Signature of Authorized EPA Official	B. Title of Authorized Official	C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.
Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name: Prefix: | First Name: Robyn | Middle Name:
Last Name: Hill | Suffix:
Title: Development Manager

Complete Address:

Street1: 2093 Philadelphia Pike #4133
Street2:
City: Claymont | State: DE: Delaware
Zip / Postal Code: 19703 | Country: USA: UNITED STATES
Phone Number: 5033628303 | **Fax Number:**
E-mail Address: robynh@sraproject.org

Payee: *Individual authorized to accept payments.*

Name: Prefix: | First Name: Katie | Middle Name:
Last Name: Engelman | Suffix:
Title: Operations & HR Director

Complete Address:

Street1: 2093 Philadelphia Pike #4133
Street2:
City: Claymont | State: DE: Delaware
Zip / Postal Code: 19703 | Country: USA: UNITED STATES
Phone Number: 5033628303 | **Fax Number:**
E-mail Address: katiee@sraproject.org

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name: Prefix: | First Name: Katie | Middle Name:
Last Name: Engelman | Suffix:
Title: Operations & HR Director

Complete Address:

Street1: 2093 Philadelphia Pike #4133
Street2:
City: Claymont | State: DE: Delaware
Zip / Postal Code: 19703 | Country: USA: UNITED STATES
Phone Number: 5033628303 | **Fax Number:**
E-mail Address: katiee@sraproject.org

EPA Form 5700-54 (Rev 4-02)

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: | First Name: Maria | Middle Name:

Last Name: Payan | Suffix:

Title: Senior Regional Representative

Complete Address:

Street1: 2093 Philadelphia Pike #4133

Street2:

City: Claymont | State: DE: Delaware

Zip / Postal Code: 19703 | Country: USA: UNITED STATES

Phone Number: 5033628303 | **Fax Number:**

E-mail Address: mariap@sraproject.org

EPA Form 5700-54 (Rev 4-02)

Other Attachment File(s)

*** Mandatory Other Attachment Filename:** 1235-Combined Mandatory Files.pdf

Add Mandatory Other Attachment | Delete Mandatory Other Attachment | View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment | Delete Optional Other Attachment | View Optional Other Attachment

Project Narrative File(s)

*** Mandatory Project Narrative File Filename:** 1234-Project Narrative_DE-MD Community Ag Air Emission

Add Mandatory Project Narrative File | Delete Mandatory Project Narrative File | View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File | Delete Optional Project Narrative File | View Optional Project Narrative File

OMB Number: 4040-0004
Expiration Date: 12/31/2022

Application for Federal Assistance SF-424

* 1. Type of Submission:	* 2. Type of Application:	* If Revision, select appropriate letter(s):
☒ Preapplication	☒ New	
☐ Application	☐ Continuation	* Other (Specify):
☐ Changed/Corrected Application	☐ Revision	

* 3. Date Received:	4. Applicant Identifier:
03/24/2022	

5a. Federal Entity Identifier:	5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:	7. State Application Identifier: Delaware

8. APPLICANT INFORMATION:

* a. Legal Name: Socially Responsible Agriculture Project

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
20-8688122	1185946240000

d. Address:

* Street1:	2093 Philadelphia Pike #4133
Street2:	
* City:	Claymont
County/Parish:	
* State:	DE: Delaware
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	19703-2424

e. Organizational Unit:

Department Name:	Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:		* First Name:	Robyn
Middle Name:			
* Last Name:	Hill		
Suffix:			

Title: Development Manager

Organizational Affiliation:

* Telephone Number:	503-362-8303	Fax Number:	

* Email: robynh@sraproject.org

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act

*** 12. Funding Opportunity Number:**

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Delaware/Maryland Community Ag Air Emissions Project

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: DE-01 * b. Program/Project: MD-01

Attach an additional list of Program/Project Congressional Districts if needed.

1240-Congressional Districts.docx | Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 01/01/2023 * b. End Date: 12/31/2025

18. Estimated Funding ($):

* a. Federal	495,328.00
* b. Applicant	68,790.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	564,118.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Robyn

Middle Name:

* Last Name: Hill

Suffix:

* Title: Development Manager

* Telephone Number: 503-362-8303 Fax Number:

* Email: robynh@sraproject.org

* Signature of Authorized Representative: Robyn Hill * Date Signed: 03/24/2022

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. DE/MD Community Ag Air Emissions Project	66.034	$	$	$ 495,328.00	$ 68,790.00	$ 564,118.00
2.						
3.						
4.						
5. Totals		$	$	$ 495,328.00	$ 68,790.00	$ 564,118.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1)	(2)	(3)	(4)	Total (5)
	DE/MD Community Ag Air Emissions Project				
a. Personnel	$ 0.00	$	$	$	$ 0.00
b. Fringe Benefits	0.00				0.00
c. Travel	527.00				527.00
d. Equipment	41,248.00				41,248.00
e. Supplies	5,000.00				5,000.00
f. Contractual	317,160.00				317,160.00
g. Construction	0.00				0.00
h. Other	86,363.00				86,363.00
i. Total Direct Charges (sum of 6a-6h)	450,298.00				$ 450,298.00
j. Indirect Charges					$
k. TOTALS (sum of 6i and 6j)	$ 450,298.00	$	$	$	$ 450,298.00
7. Program Income	$ 0.00	$	$	$	$ 0.00

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Prescribed by OMB (Circular A -102) Page 1A

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. DE/MD Community Ag Air Emissions Project	$ 68,790.00	$ 0.00	$ 0.00	$ 68,790.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 68,790.00	$ 0.00	$ 0.00	$ 68,790.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 495,328.00	$ 123,832.00	$ 123,832.00	$ 123,832.00	$ 123,832.00
14. Non-Federal	$ 68,790.00	17,197.50	17,197.50	17,197.50	17,197.50
15. TOTAL (sum of lines 13 and 14)	$ 564,118.00	$ 141,029.50	$ 141,029.50	$ 141,029.50	$ 141,029.50

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. DE/MD Community Ag Air Emissions Project	$ 165,115.00	$ 165,110.00	$ 165,103.00	$ 0.00
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 165,115.00	$ 165,110.00	$ 165,103.00	$ 0.00

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges: $450,298

22. Indirect Charges: $45,030

23. Remarks:

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SRAP
Socially Responsible Agriculture Project

March 24, 2022

To Whom it May Concern:

As verified under public procurements of the Contractor (Aclima) by leading air regulatory agencies including the South Coast Air Quality Management District and the Bay Area Air Quality Management District in California, the Contractor provides a hyperlocal environmental data product that is wholly unique in the commercial market. In addition, the Contractor possesses unique experience and capabilities that are not available from any other vendor. Staff of these public agencies performed an extensive search of the market, and due diligence of the Contractor, and were unable to locate any other commercial vendor to perform the work. Therefore, the contractor passed the rigorous procurement policies of these agencies to be granted a sole source award.

Further, the project's data outputs can only be achieved with the Contractor's methodology, which involves the use of patented proprietary technology and methods. The Contractor has ownership of key assets required for project performance. The Contractor is also the only contractor capable of delivering hyperlocal PM, black carbon, and other criteria air pollution data with block-by-block resolution using a scalable, modular mobile platform that combines leading-edge sensor technology and machine learning to generate high-resolution maps. The Contractor's proprietary sensor calibration, deployment, sampling architecture, and data handling are unique and serve the foundation of the community monitoring and analysis proposed in this grant application. This combination of technology and capabilities are not available from any other source commercially, therefore this justification for sole source award is consistent with regulation CFR 200.320 Sec (c)(3) *Noncompetitive procurement*.

Sincerely,

Sherri Lynn Dugger

Sherri Dugger, Executive Director

Manifest for Grant Application # GRANT13579875

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 26948 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16136 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24117 bytes)

3. Form SF424A-V1.0.pdf (size 23192 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22734 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15895 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37247 bytes)

Attachments Included in Zip File (total 7):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-Cerex Hound Series Catalog 2022 - REV20220215.pdf application/pdf (size 533336 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-Combined Resumes and CVs.pdf application/pdf (size 3204247 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1239-Uniqueness Letter.pdf application/pdf (size 99237 bytes)

4. SF424_3_0 SF424_3_0-1240-Congressional Districts.docx application/vnd.openxmlformats-officedocument.wordprocessingml.document (size 11501 bytes)

5. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1234-Project Narrative_DE-MD Community Ag Air Emissions Project.pdf application/pdf (size 1070014 bytes)

6. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-Combined Mandatory Files.pdf application/pdf (size 510623 bytes)

7. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Combined LOS.pdf application/pdf (size 2063768 bytes)

Congressional Districts

Somerset County, MD – MD-01

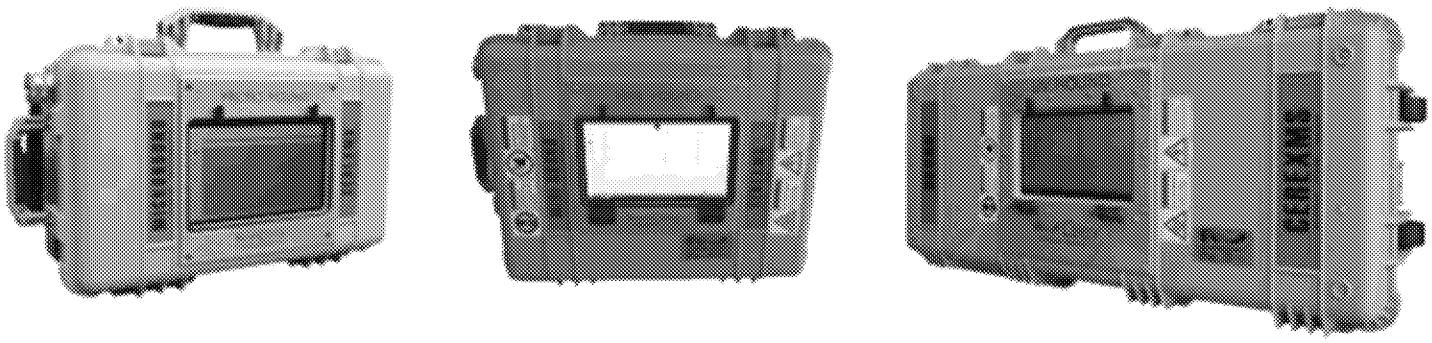
Sussex County, MD – MD-01

Sussex County, DE – DE-01

CEREX
MONITORING SOLUTIONS, LLC.

Distributor Guide 2022

Hound Series Portable UVDOAS Analyzers



Prices and technical specifications are subject to change without notice. Please contact Cerex to verify current pricing and technical specifications prior to issuing sales quotations.

CEREX MONITORING SOLUTIONS, LLC.
1816 Briarwood Industrial Court, Suite D, Atlanta, GA 30329
Phone: (678) 570-6662 Fax:(404) 856-0610 Web: www.cerexms.com

Hound Series Portable UVDOAS Multi-Gas Analyzers

Description

Hound series analyzers are portable multi-gas analyzers designed specifically for ambient air monitoring of low ppb levels of toxic gases. Three models are available and differ only in their physical dimensions, weight and detection limits.

Micro Hound, Mini Hound and Hound Models

All models are equipped with an integrated touchscreen computer with familiar Windows®[1] operating system. This provides the ideal platform for Continuous Monitoring Software, the analyzers' analytic, data-logger and user-interface software package. With simple, intuitive controls and large buttons, the touchscreen user interface is easy to use and includes a protective cover. USB ports make the addition of USB peripherals such as a Flash Drive for data transfer, Cellular Modem for remote control, or webcam a simple matter. Connecting to the Internet via WiFi, Ethernet or Cellular Modem allows remote control and data access from any computer with Internet access and login credentials via VNC. Data and alarms may be automatically delivered by email. Hound analyzers may be deployed and environmental conditions monitored by onsite personnel as well as remote decision makers via any PC or smartphone with an internet connection. All Hound Series Analyzers are capable of long term continuous, unattended operation when connected to A/C power.

Figure 1 Mini Hound Model

[1] Windows is a registered trademark of Microsoft Corporation in the United States and many other countries.

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1816 Briarwood Industrial Court, Suite D, Atlanta, GA 30329
Phone: (678) 570-6662 Fax:(404) 856-0610 Web: www.cerexms.com

CEREX Hound Analyzer Features

Cerex UVDOAS technology provides significant advantages when compared to GC, PID, NDIR, electrochemical, and other sacrificial sensor technology.

- Real time simultaneous detection of ppb level concentrations of many individual VOCs and Combustion gases such as benzene, toluene, nitrogen dioxide, nitrogen monoxide, sulfur dioxide and more.
- No ongoing span calibration. Span calibration is inherent in the digital reference file used for quantification each target gas and is not subject to drift. There is no requirement for labor or span gas expenses and no tedious calibration work is necessary to correct drift and calibration errors associated with other technologies.
- Simplified performance audit. Analyzer performance may be easily audited at any time desired using primary standard gas to produce a traceable record of performance.
- No interference by humidity, and cannot be poisoned by large concentrations of gas. Water vapor in ambient air will not interfere with gas detection, and the technology is not consumable based on quantity of gas measured. Clear down is immediate.
- Only three consumable items: The UV source, sample intake filter and enclosure air filter. All are field replaceable in under fifteen minutes. The deuterium UV source carries a 4000 hour manufacturer half life warranty. Typical operation exceeds 5000 hours.
- No analytic costs associated with real time data.
- A permanent record of the gases in the air at the time of monitoring is recorded independent of calibration and zero setting. Third party data verification of real time data is possible at any time in the future.
- Touchscreen interface with protective cover.
- Remote access and control via connection to existing network over Internet.
- Remote access and control via operator supplied USB Cellular Modem.
- Removable battery can be changed for a charged battery as needed.

CEREX MONITORING SOLUTIONS, LLC.
1816 Briarwood Industrial Court, Suite D, Atlanta, GA 30329
Phone: (678) 570-6662 Fax:(404) 856-0610 Web: www.cerexms.com

CEREX Hound Series Detection Capabilities

Please note that Hound series analyzers will detect many gases simultaneously but some must be monitored individually. Also the presence of interference species may obscure some gases or cause false positives under certain circumstances.

*Table 1 Hound analyzer typical real time minimum detection limits. * Some compounds not tested using ASTM D6348 MDC2 method. ** H2S is subject to severe interference form BTEX, an high concentrations of NO2, NH3, CS2, SO2...*

Comparison of Hound Analyzer Single Gas MDLs, Previous CMS vs. CMS 4.1.352.1, N=919				
	Default Mode		MAG MODE CMS REV 4.1.352.1	
Gas	Average MDL PPB	STD DEV	Average MDL PPB	STD DEV
1-3 Butadiene	0.07	0.006	0.008	0.001
Acetaldehyde*	178	N/A	Not tested	N/A
Acrolein	645.42	53.625	70.057	6.677
Ammonia	6.44	0.913	0.664	0.114
Benzene	7.07	1.043	0.78	0.154
Carbon Disulfide	1.95	0.19	0.209	0.026
Chlorine*	1000	N/A	1000	N/A
Cyanogen*	25	N/A	Not tested	N/A
Ethylbenzene	10.79	1.257	1.247	0.185
Formaldehyde	5.73	0.613	0.633	0.081
Hydrogen Sulfide**	1.68	0.207	0.21	0.039
Mercury	< 0.02	0.003	< 0.003	0.00049
m-Xylene	1.3	0.241	0.159	0.034
Naphthalene	0.95	0.078	0.101	0.01
Nitric Oxide	3.86	0.448	0.441	0.063
Nitrogen Dioxide	33.02	2.523	3.5	0.308
o-Xylene	12.84	1.138	1.43	0.187
p-Xylene	3.36	0.373	0.367	0.048
Phenol*	18	N/A	Not tested	N/A
Styrene	4.58	0.498	0.507	0.063
Sulfur Dioxide	5.07	0.748	0.548	0.087
Toluene	5.75	0.652	0.662	0.095

CEREX MONITORING SOLUTIONS, LLC.
1816 Briarwood Industrial Court, Suite D, Atlanta, GA 30329
Phone: (678) 570-6662 Fax:(404) 856-0610 Web: www.cerexms.com

Standard Gas Compounds and Alarms

As shipped gas detection and alarm configuration is detailed below. All specified references are supplied for use with synthetic backgrounds enabled. Hound series analyzers are provided with the Cerex UVDOAS library of calibrated UV cross sections as well as Cerex Data Processor software.

Hound Analyzer Standard Alarm Settings		
Compound	Detection Alert	Concentration Alert
	Set Row Color Yellow	Set Row Color Red, Audible Alarm, Red Blinking LED
Ammonia	R2 >0.75	Concentration PPB > 300000 PPB, and R2 >0.75
Benzene	R2 >0.6	Concentration PPB > 500000 PPB, and R2 >0.6
Butadiene	R2 >0.7	N/A
Carbon Disulfide	R2 >0.7	Concentration PPB > 500000 PPB, and R2 >0.7
Ethylbenzene	R2 >0.7	Concentration PPB> 800000 PPB, and R2 >0.7
Formaldehyde	R2 >0.7	Concentration PPB > 20000 PPB, and R2 >0.7
m-Xylene	R2 >0.6	Concentration PPB > 900000 PPB, and R2 >0.6
Naphthalene	R2 >0.7	Concentration PPB > 250000 PPB, and R2 >0.7
Nitrogen Dioxide	R2 >0.8	Concentration PPB > 20000 PPB, and R2 >0.8
Nitrogen Oxide	R2 >0.75	Concentration PPB > 100000 PPB, and R2 >0.75
o-Xylene	R2 >0.7	Concentration PPB > 900000 PPB, and R2 >0.7
Ozone	R2 >0.65	Concentration in PPB > 5000 PPB, and R2 >0.65
p-Xylene	R2 >0.65	Concentration in PPB > 900000 PPB, and R2 >0.65
Sulfur Dioxide	R2 >0.75	Concentration in PPB > 100000 PPB, and R2 >0.75
Toluene	R2 >0.65	Concentration in PPB > 500000 PPB, PPB R2 >0.65

Options

- Auxiliary Sensors

Up to six additional sensors may be added to the Hound-FR, four to the Mini Hound-FR and three to the Micro Hound-FR to provide monitoring of gases not sensitive to UVDOAS technology. Data from additional sensors is fully integrated into CMS and displayed per acquisition cycle as well as integrated into CMS .csv data summary tables. Below is a table of commonly requested additional sensors.

CEREX HOUND Series Optional Sensors						
Compound	Technology	TYP Lifetime	Range	LDL	Accuracy	Response Time T-90
Arsine (AsH3)	Electrochemical	2-3 Years	0 - 1.5 PPM	2% FS	±5% FS	60 S
Carbon Monoxide (CO)	Electrochemical	2-3 Years	0 - 300 PPM	2% FS	±5% FS	30 S
Carbon Dioxide (CO2)	Infrared	5 + Years	0 - 5000 PPM	2% FS	±5% FS	30 S
			0 - 5% VOL			
			0 - 50% VOL			
			0 - 100% VOL			
Hydrogen Cyanide (HCN)	Electrochemical	2-3 Years	0 - 15 PPM	2% FS	±5% FS	60 S
LEL (General Purpose)	Catalytic	2-3 Years	0 - 100% LEL	2% FS	±5% FS	30 S
Methane (CH4)	Infrared	5 + Years	0 - 100% LEL	1% LEL	±5% FS	30 S
Oxygen (O2)	Galvanic Cell	2-3 Years	0 - 25% Vol	0.1% FS	±0.5% Vol	20 S
Hydrogen Sulfide (H2S)	Electrochemical	2-3 Years	0 - 100 PPM	2% FS	±5% FS	45 S

- Integrated 3-D Wind Mapping

Adds an integrated 3-D ultrasonic anemometer, data acquisition port and integration of wind data into gas data tables.

- Spare Battery, or External Batteries

Hound series analyzers may be ordered with a spare internal battery or external battery systems. The spare internal battery is suitable for cold swap. The analyzer must be powered off during battery change and restarted after.

- External Spare Charger

Allows a spare internal or external battery to be charges when not connected to the analyzer.

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PRICE SUMMARY – CEREX Hound Series Multi-Gas Analyzers

QTY	Part No.	Description	Price EA. $USD	EXT Price $USD
0	Hound-FR	**Cerex Hound-FR Multi-Gas Portable Air Analyzer** Includes the following items: Touch Screen User Interface Deuterium UV source (4000+hr) 16.8 meter optical sample path Temperature controlled high resolution UV spectrometer Integrated PC controller with 32GB storage 1 (ea) Sealed external USB Port 1 (ea) Sealed external LAN Port 1 (ea) 120 OR 220 VAC power cable (please specify) 1 (ea) 3.5 Hour Li-Po system battery with integrated battery charger 3 Meter Sample Hose with quick connect port fitting Calibration / QA sample inlet quick connect fitting, ¼" tubing port Calibration / QA exhaust port adapter, 3/8" tubing port Audible and Visual Alarms, user configurable Cerex Spectral Library Access 1 Year standard warranty Continuous Monitor Software and Data Processor	$39,905.00	$0.00
0	Mini Hound-FR	**CEREX Mini Hound-FR Multi-Gas Portable Air Analyzer** Same as above except smaller and uses an 8.5 meter sample path.	$Discontinued Product	$0.00
0	Micro Hound-FR	**CEREX Micro Hound-FR Multi-Gas Portable Air Analyzer** Same as above except 4.8 meter sample path and deletes external LAN and WAN ports.	$36,225.00	$0.00
	Training	Training is provided at no cost either in our Atlanta, GA. USA facility, or via Internet.	No Charge	
	Shipping	Shipment of Hound Series Product. Shipping Cost TBD. May be invoiced (billed at actual cost) or we can use your shipping account.	Not Included & TBD	

15 February 2022
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Hound Series Analyzer Consumables				
QTY	**Part No.**	**Item**	**Price EA. USD**	**EXT Price USD**
0	P/N 50005	**Replacement Deuterium UV Source (4000 hour half-life)**	$1,135.00	
0	P/N 50005NH	**Air Inlet Filter, NON- HEPA , 5 micron** Replace as necessary or every 6 months.	$52.00	
0	P/N 50006NH	**Sample Inlet Filter,NON- HEPA, 5 micron** Replace as necessary or every 6 months.	$52.00	

Hound Series Analyzer, Optional Sensors			
QTY	**Part No.**	**Item**	**Price (ea) $USD**
0	Hound-ADC	**Analog to Digital Input Converter** (*QTY 1 Required for installation of additional sensors*) 8 Channel analog interface card.	$670.00
0	Hound-ASH3	Arsine Sensor	$1,120.00
0	Hound-CO2	Carbon Dioxide Sensor (Please Specify Range)	$1,316.00
0	Hound-CO	Carbon Monoxide Sensor	$812.00
0	Hound-HCN	Hydrogen Cyanide Sensor	$1,120.00
0	Hound-LEL	LEL – General Purpose (n-Hexane, or specify calibration gas)	$735.00
0	Hound-CH4	Methane Sensor	$1,393.00
0	Hound-O2	Oxygen Sensor	$812.00
0	Hound-H2S	Hydrogen Sulfide Sensor	$812.00

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Hound Series Analyzers, Optional Batteries, External Charger			
QTY	**Cerex Part #**	**Description**	**Total Price (ea) $USD**
0	P/N 20002	**Spare Li-Po Battery** Internal Li-Po battery system capable of providing up to 3.5 hours of extra operation Uses standard internal charger or standard Hound Series External Charger PN 20002C.	$1,569.00
0	P/N 20002A	**External Li-Po Double Battery** External Li-Po battery system capable of providing up to 7 hours of extra operation beyond the analyzer internal battery. Utilizes two 3.5 Hour Li-Po batteries in one sealed weather resistant case. May be charged by connecting to Hound analyzer which is connected to AC power, or charged by optional external battery charger.	$2,144.00
0	P/N 20002B	**Maximum Performance External Battery System** External 42 AH battery system capable of providing up to 14 hours of extra operation beyond the analyzer internal battery. May be charged by connecting to Hound analyzer which is connected to AC power, or charged by optional external battery charger.	$2,374.00
0	P/N 20002C	**External Li-Po Standard Battery Charger** The Shepherd FTIR internal charger will charge the internal and external batteries when connected to the battery and connected AC power. This external smart charger for use with internal Hound analyzer battery (removed from analyzer) or external battery systems if it is desired to have two charging systems or a battery on standby charge while the analyzer is not connected to AC power.	$1,82800

Hound Series Analyzers, Accessories			
QTY	**Cerex Part #**	**Description**	**Total Price (ea) $USD**
0	P/N 45003	**Transit and Storage Case: Micro Hound-FR and Mini Hound-FR** Contains 1.75" inner foam to surround and protect product. Lid of case is hinged on one side, and latched on the other. Holds Analyzer, Charger, Cables and Sampling accessories. Equipped with wheels and telescoping handle.	$1,310.00
0	P/N 45003A	**Transit and Storage Case: Hound-FR** Contains 1" inner foam to surround and protect product. Lid of case is hinged on one side, and latched on the other. Holds Analyzer, Charger, Cables and Sampling accessories. Equipped with wheels and recessed handle.	$1,810.00
0	P/N 59997	**Low Cost Meteorological System** Vantage Pro 2 Meteorological station with data integration into CMS data summary files	$1,040.00
0	P/N 59998	**3-D Ultrasonic Anemometer System**	$3,855.00

		Serial data stream integration into the Hound-FR data tables for 3-D and 2-D wind speed/direction, and ultrasonic temperature. Annual wind tunnel calibration recommended.	

Extended Warranty				
QTY	**PN**	**Item**	**Price EA USD**	**EXT Price USD**
0		**Hound**	$4,905.00	$0.00
0		**Mini-Hound**	$4,860.00	$0.00
0		**Micro-Hound**	$4,725.00	$0.00
		The price is for each additional year after the first year. (The first year is included at no charge) * The warranty price shown covers materials and labor for repair of any fault in the system. * The warranty does not cover items considered as “consumables”. This includes filters and UV Lamps. * The warranty does not cover damage incurred when using the system in conditions outside the scope of recommended operation (damage to mirrors, or other permanent damage due to high levels of smoke or corrosive gases being introduced). * This warranty does not cover total loss or catastrophic damage. It is meant to cover parts that may fail during normal use of the system. * Cerex will pay the shipping related to any fault in the system which is determined to be related to defect in materials or workmanship. Otherwise, end-user is responsible for the shipping charges both to the repair site, and back to the end-user location.		

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Quotation Terms and Conditions

1) Prices shown are wholesale prices. List prices are 35% higher. Add your profit before quoting customer.
2) Quotation valid only for 30 days. Price is quoted in US Dollars. After expiration, please call for new quote.
3) Shipping F.O.B Origin (Atlanta, GA 30329 ,USA). Shipping Cost Not Included in Price Quote.
4) Delivery – Shipment from Cerex 6-8 weeks (or sooner) ARO after receipt of order
5) The Hound-FR system described (above) is covered by Cerex Monitoring Solutions, LLC (hereafter referred to as "CMS" standard 1 year warranty. Exceptions are the UV Source which is guaranteed for 4000 hours (typical operation exceeds 5000 hours, the UV source is user serviceable), and consumable filters.
6) CMS assumes no liability with respect to use of data collected, misuse of hardware or software, mishandling, and/or other improper operation of the system. CMS is not responsible for any direct, indirect, or consequential damages.
7) CMS is not responsible for any damage, theft, or other losses associated with the above described system beginning immediately upon departure from our facility in Atlanta, GA.
8) Payment in full (in $USD) due upon (at the time of, and prior to) shipment of materials. Wire transfer information to be provided upon request.
9) Product is shipped in triple-walled cardboard box with foam, unless optional shipping transit case is selected.
10) Acceptance of this order is contingent upon customer acceptance of Cerex's standard terms and conditions.

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HOUND-Series ANALYZER MINIMUM DETECTION LIMITS (MDL'S)

Cerex Statement on MDL's (Minimum Detection Limits)...

Currently there are a number of definitions of "detection limits" used to characterize the performance of air monitoring systems. A common definition of is the magnitude of the absorbance spectra that is twice the system noise. The Environmental Protection Agency's "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air - Second Edition Compendium Method TO-16 Long-Path Open-Path Fourier Transform Infrared Monitoring Of Atmospheric Gases" defines detection limits as the following:

The detection limit of the Hound-FR systems is a dynamic quantity that will change as the atmospheric conditions change. The variability of the target gas, and all of the other interfering species concentrations contributes to the variability of this measurement. The detection limit as determined in this procedure is the result of a calculation using a set of 15 individual absorption spectra. The 16 individual single beam spectra used for this determination are acquired in 5-min intervals and no time is allowed to elapse between them. The absorption spectra are then created by using the first and the second single beam spectra, the second and the third, and the third and the fourth, and so on until the 15 absorption spectra are obtained. These absorption spectra are analyzed in exactly the same way that all field spectra are to be analyzed and over the same wave number region. The analysis should result in a set of numbers that are very close to zero because most of the effects of the gas variability have been removed. The numerical results should be both positive and negative and for a very large set of data should average to zero. Three times the standard deviation of this calculated set of concentrations is defined to be the detection limit.

Although Method TO-16 was written for open path FTIR, the Cerex UV Hound system is unique among UV systems in that the raw data is essentially identical to an FTIR "Single beam" file, and hence the direct correlation drawn to TO-16. Using the detection limit definition described in TO-16, CEREX developed the detection limits that are listed above. It should be noted however that the actual detection limits achieved in the field will vary. This is primarily due to the fact that variations in interfering species will result in variability in detection limits. Cerex considers the detection limits listed to be a very conservative estimate. The end-user of the equipment will likely achieve much better results in the field. Cerex believes it is a good policy to not oversell a capability to our potential customers.

Mission

Through education, advocacy, and organizing, SRAP collaborates with communities to protect public health, environmental quality, and local economies from the damaging impacts of factory farms and to advocate for a socially responsible food future.

Vision

Supported by SRAP, communities across the U.S. are able to replace industrial livestock production with ecologically sound, socially equitable, and economically viable animal agriculture.

Values

With industrial livestock production comes injustice … to the environment, to people, to animals, and to the planet. Today's consolidated food and agriculture system drives independent family farmers off the land, abuses food system workers, perpetuates social and racial injustices, pollutes our air and water, exacerbates climate change, compromises animal welfare, extracts wealth from rural communities, and damages public health. In short, it harms every aspect of life.

Socially responsible agriculture, on the other hand, can rebuild critically needed topsoil, reduce water and air pollution, strengthen rural economies, and support human health and food security, all while providing climate resiliency. With socially responsible agriculture, we all thrive.

SRAP provides free assistance to communities threatened by industrial livestock operations. Our commitment to diversity, equity, and inclusion is reflected in the communities we serve, many of which face social, economic, and racial injustices. We value individuality, and lean on unique and varied perspectives to collaborate with communities to stand up to the abuses of factory farms while advocating for a socially responsible food future.

Quality Assurance Statement - Aclima

Measurements provide the foundation for understanding, evaluating, and managing the impact of pollutant emissions sources on air quality, health, and the ecosystem. Three components are necessary for a measurement to have meaning: the numerical value reported by the measurement device, units of the measurement (e.g., ppb, ppm, ug/m3), and an uncertainty estimate (including but not limited to accuracy and precision). Aclima has developed an extensive four-level quality assurance program to monitor and assess performance of our mobile and stationary measurements to ensure the highest quality data possible, as follows:

1. Thorough evaluation and calibration of the instruments, before and after deployment, against reference methods[1] under real-world driving conditions as well as assessment of performance relative to regulatory monitoring stations during deployment, and
2. Evaluation of data quality where the time resolved (1-Hz) measurements are evaluated during and after the project period is completed. Aclima also evaluates performance of our aggregated data product in our hyperlocal maps, referred to as platform level evaluation,
3. Comparison to appropriate regulatory stations measurements after final data validation, and
4. Scientific evaluation, ensuring multivariable spatial and temporal trends are consistent with scientific atmospheric understanding.

Aclima's primary measurement and mapping objective is to generate scientifically-valid, high quality data of ambient air quality and greenhouse gas measurements at high spatial and temporal resolution with well characterized uncertainty. Aclima's research and related peer-reviewed scientific publications (Apte et. al. 2017, Messier et. al. 2018, Guan et al. 2020, Chambliss et. al. 2020) have shown that mobile measurements can create precise estimates of persistent air pollution and greenhouse gas levels at high spatial resolution. Aclima's cutting-edge proprietary multipollutant, mobile air quality devices include CO, CO2, NO_2, O_3, black carbon (BC), CH4, and $PM_{2.5}$, allowing users to distinguish differences in pollutant concentrations at the city block level, enabling the identification of localized areas of persistent high pollution. Aclima also measures relevant parameters for systems diagnostics. Aclima's measurements across a range of communities and other studies have shown higher pollutant levels in disadvantaged communities, thus a greater risk of adverse health effects.

Aclima has developed Quality Assurance Plans (QAP) and Standard Operating Procedures (SOP) designed to produce the highest quality measurements with well characterized uncertainty. Aclima's mobile sensor Data Quality Objectives meet or exceed EPA's sensor performance

[1] FRM, FEM, laboratory-grade, or historically tested methods with well defined uncertainty over a wide range of conditions are used by Aclima as reference instruments for calibrating and evaluating precision and bias of sensors.

guidance for $PM_{2.5}$, O_3, NO_2, and CO (Williams et al., 2019; Duvall et al., 2020; Duvall et al., 2021). EPA has not developed performance guidance for other pollutants measured by air pollution sensors.

Aclima's comprehensive device-level QAP provides performance statistics, such as bias, precision, and data completeness relative to reference methods[1] for pollutants at various measurement time intervals. Multi-level calibrations are performed before and after deployment to provide calibration factors that account for differences in environmental factors between sensor calibration and ambient measurements. At the device level, sensors must meet strict Measurement Quality Objectives (MQOs) before deployment. Meeting MQOs then assures that Aclima meets overall project measurement objectives. To ensure that data of highest quality are used to develop our hyperlocal maps, all pollutant and supporting measurements undergo a rigorous three-phase data verification and validation process (Preliminary 1, Preliminary 2, Verified). **Preliminary 1 data** validation and verification occurs continuously while data are collected. All 1-second data undergo an automated screening process to identify and flag invalid data resulting from sensor failure or collection outside of optimal environmental and physical operating conditions. In addition, all data are screened manually on a weekly basis to identify anomalies and other issues not identified by the automated screening process measurement. **Preliminary 2** data verification occurs in two steps, just before and after the end of the project period. In both steps, the dataset is evaluated as a whole for measurement anomalies that may not have been observed when reviewing weekly data. After the first step, sensors are re-calibrated and updated calibration coefficients are applied across the project period followed by a repeat review of the data. **Verified**, consists of a final review of the data after all calibrations or other changes have been applied. Once verified, the underlying device level data is final and not expected to undergo any further changes.

Subsequent to our measurement QA processes, Aclima evaluates the performance of the aggregated data product used in our hyperlocal maps, termed a platform level evaluation. This is a scientific review at the network level to further validate the results of our device level data review and to ensure multivariate spatial and temporal trends are consistent with scientific atmospheric understanding. Firstly, aggregated hyperlocal pollution data, for example median road segment concentrations are compared to equivalent concentrations reported by a regulatory station for data within a suitable distance from that site. Secondly, the mean of measurements obtained for a single pass along a ~100 meter road segment are compared with the appropriate hourly averaged regulatory site data. The latter individual comparisons are averaged over the monitoring area for the monitoring period. These approaches result in estimates for bias (MBE, mean bias error) and precision (CRMSE - Centered root-mean-square error), which provide quantifiable measures of how well the aggregated mobile pollution concentrations agree with regulatory estimates of local concentrations.

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: JUL 31 2007

SOCIALLY RESPONSIBLE AGRICULTURAL
PROJECT INC
C/O WILLIAM J WEIDA
PO BOX 687
MCCALL, ID 83638

Employer Identification Number:
20-8688122
DLN:
17053094008037
Contact Person:
ELIZABETH MARQUEZ ID# 95117
Contact Telephone Number:
(877) 829-5500

Accounting Period Ending:
December 31
Public Charity Status:
170(b)(1)(A)(vi)
Form 990 Required:
Yes
Effective Date of Exemption:
March 15, 2007
Contribution Deductibility:
Yes
Advance Ruling Ending Date:
December 31, 2011

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. During your advance ruling period, you will be treated as a public charity. Your advance ruling period begins with the effective date of your exemption and ends with advance ruling ending date shown in the heading of the letter.

Shortly before the end of your advance ruling period, we will send you Form 8734, Support Schedule for Advance Ruling Period. You will have 90 days after the end of your advance ruling period to return the completed form. We will then notify you, in writing, about your public charity status.

Please see enclosed Information for Exempt Organizations Under Section 501(c)(3) for some helpful information about your responsibilities as an exempt organization.

If you distribute funds to other organizations, your records must show whether they are exempt under section 501(c)(3). In cases where the recipient organization is not exempt under section 501(c)(3), you must have evidence the

March 18, 2022

Attn: Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

Concerned Citizens Against Industrial CAFOs (CCAIC) is a community-based organization located on the Lower Eastern Shore in Maryland. CCAIC was organized in 2015 to address the underlying issues of industrial scale poultry operations that impact Eastern Shore communities, particularly Black, Indigenous and People of Color (BIPOC) and low-wealth communities. CCAIC's mission is to raise awareness of the numerous impacts of industrial scale poultry operations- also known as CAFOs, as well as help communities fight back. We work to increase the health and quality of life of the communities that we serve by spreading awareness and connecting communities to appropriate tools for success in stopping mega poultry production from violating our rights and our health. We do this work through the lens of environmental justice and health equity.

As the co-founder of CCAIC, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, Sentinels of Eastern Shore Health (SESH) and Sussex Health and Environmental Network (SHEN). With this partnership, we were able to successfully shut down a proposed 13-house Mega CAFO facility in Wicomico County, as well as raise awareness about Environmental Justice issues on the shore, thus slowing the poultry industry down on their production of new facilities.

This project will directly work to increase the awareness and education of our community members, support the use of tools that will measure air quality and work to lessen exposure and work toward policies that consider exposures. Moreover, we support the focus on populations of concern: BIPOC individuals and low-wealth communities who are differentially impacted by exposure to harmful air quality and exposures from ammonia, VOCs and other air pollutants.

Specifically, our community organization will work with the research team, the community and technical advisory committee and project member community groups to achieve the goals and objectives of the proposed project. We will assist the team in a number of areas:

- Outreach to and engagement of communities impacted by air pollution, environmental injustice, and public health issues in the study area
- Sharing materials about the project with our members and networks
- Recruitment of potential participants and workforce development for the project

- Work with the research team to learn and implement principles of community-based participatory research (CBPR) in order to build community capacity to address environmental injustice and environmental health disparities in the communities that we serve
- Assist with the dissemination of research results including data, products, and tools with local residents, partners, and other stakeholders
- Assist the research team in recruitment of residents for data collection
- Work alongside communities to promote adaptive governance and community stewardship

In closing, I strongly endorse the proposed goals of the Enhanced Air Quality Monitoring for Communities. The goals and objectives of the proposed project are consistent with our vision to help build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life and the health of their local ecosystems. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable. I wish you and your team the best of luck with this endeavor and we look forward to assisting you in the future.

Sincerely,

Gabrielle Ross
Co-founder, Concerned Citizens Against Industrial CAFOs

COMITE DE APOYO A LOS TRABAJADORES AGRICOLAS
FARMWORKERS SUPPORT COMMITTEE

C.A.T.A.

March 19, 2022

P.O. Box 510
4 S. Delsea Dr.
Glassboro, NJ 08028
Tel: 856-881-2507
Fax: 856-881-2027
catanj@aol.com
www.cata-farmworkers.org

66 Atlantic St.
Bridgeton, NJ 08302
Tel: 856-575-5511

312 West State St., Suite 210
P.O. Box 246
Kennett Square, PA 19348
Tel: 610-444-9696

200 East Church St.
Salisbury, MD 21801
Phone: 410-572-5959
Fax: 410-572-5999

P.O. Box 4362
Salisbury, MD 21803

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

The Farmworkers Support Committee (CATA - El Comite de Apoyo a Los Trabajadores Agricolas) is a community-based organization located in Maryland. CATA was organized in 1979 to address the underlying issues that impact communities, particularly Black, Indigenous and People of Color (BIPOC) and low-wealth communities. CATA's long term goal for our work is to empower farmworkers and immigrant workers to fight for their rights so they can live a full life. We work to increase the health and quality of life of the communities that we serve through outreach and advocacy. We do this work through the lens of environmental justice and health equity.

CATA's Community Organizer in Maryland has developed a relationship over the past several years with SRAP and strongly supports the DE/MD Community Ag Air Emissions Project having seen the impact of the growth of the poultry industry on Eastern Shore communities. Leila is Puerto Rican, from the city of Quenepa, Ponce. Since 1986 Leila has worked with migrant workers in various areas that affect the migrant. She has worked in social services, health services, and legal services – always with an aim to ensure that Spanish speaking immigrant communities had adequate information and access to important services. Since 2012, Leila has worked with CATA. She has learned so much from all the people that she has been in contact with. Leila likes to know and share the cultures and traditions of all of them

Specifically, our community organization will work with the research team to achieve the goals and objectives of the proposed project. We will assist the team in a number of areas:

- Outreach to and engagement of communities impacted by air contamination, environmental injustice, and public health issues in the study area
- Sharing materials about the project with our members and networks
- Assisting with the translation of project materials into Spanish for dissemination to Spanish-speaking communities
- Recruitment of potential participants for the project
- Work with the research team to learn and implement principles of community-based participatory research (CBPR) in order to build community capacity to address environmental injustice and environmental health disparities in the communities that we serve
- Assist with the dissemination of research results including data, products, and tools with local residents, partners, and other stakeholders
- Assist the research team in translating research results into educational and workforce development programs per the project's education core
- Work alongside communities to promote adaptive governance and community stewardship

CATA strongly endorses the proposed efforts of this project. The goals and objectives of the proposed project are consistent with our vision to help build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life and the health of their local residents. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable. I want to wish you and your team the best of luck with this endeavor.

Sincerely,

Jessica Culley
General Coordinator, CATA

KEEP OUR WELLS CLEAN

March 17, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

As the co-founder of Keep Our Wells Clean, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. Keep Our Wells Clean was established in 2016 in Sussex County Delaware, when our community was threatened by millions of gallons of wastewater being sprayed next to our homes. Many of our wells are already contaminated with nitrates. We are a diverse community which already has more than our fair share of pollution, with many low income elderly residents, as well as children, who are both vulnerable populations.

We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, and Sussex Health & Environmental Network (SHEN).

This project will directly work to increase the awareness and education of our community members, support the use of tools that will measure air quality and work to lessen exposure and work toward policies that consider exposures. Moreover, we support the focus on populations of concern: BIPOC individuals and low-wealth communities who are differentially impacted by exposure to harmful air quality and exposures from ammonia, VOCs and other air pollutants.

Specifically, our community organization will work with the research team, the community and technical advisory committee and project member community groups to achieve the goals and objectives of the proposed project. We will assist the team in a number of areas:

- Outreach to and engagement of communities impacted by air pollution, environmental injustice, and public health issues in the study area
- Sharing materials about the project with our members and networks
- Recruitment of potential participants and workforce development for the project
- Work with the research team to learn and implement principles of community-based participatory research (CBPR) to build community capacity to address environmental injustice and environmental health disparities in the communities that we serve

KEEP OUR WELLS CLEAN

In closing, I strongly endorse the proposed goals of the Enhanced Air Quality Monitoring for Communities. The goals and objectives of the proposed project are consistent with our vision to help build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life and the health of their local communities. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable. We are happy to help with this endeavor.

Sincerely,

Anthy Scarpa
Co-Founder
Keep our Wells Clean
Milton, DE 19968

March 19th, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger

Sentinels of Eastern Shore Health (SESH) is a community-based organization located on the Lower Eastern Shore in Maryland. SESH was organized in 2019 to address the underlying issues that impact communities, particularly Black, Indigenous and People of Color (BIPOC) and low-wealth communities. We are a collective voice for positive solutions and inclusiveness in representation working towards healthy communities. Our vision of a healthy community includes environmental health, public health,economic health and social health. We do this work through the lens of environmental justice and health equity.

Specifically, our community organization will work with the research team to achieve the goals and objectives of the proposed project and I will serve as co-lead to the project director for Maryland. We will assist the team in all duties in all phases of the project.

In closing, I strongly endorse the proposed efforts of the DE/MD Community Ag Air Emissions Project. The goals and objectives of the proposed project are consistent with our vision to help build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life and lessen their exposures to work towards a more sustainable future. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable. I want to wish you and your team the best of luck with this endeavor.

Sincerely,

National Association for the Advancement of Colored People
Wicomico County NAACP Branch #7028
P. O. Box 1047 Salisbury, MD 21802 (301) -875-2623
wcnaacp7028-branch.org
Chartered December 11, 1944
"Celebrating over 110 years of Civil Rights

March 21, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

National Association for the Advancement of Colored People (NAACP) - Wicomico Branch - is a community-based organization located in Salisbury, Maryland. The National NAACP was organized in 1909 to address the underlying issues that impact communities, particularly Black, Indigenous and People of Color (BIPOC) and low-wealth communities. NAACP's long-term goal for our work is to secure the political, educational, social, and economic equality of rights in order to eliminate race-based discrimination and ensure the health and well-being of all persons. We work to increase the health and quality of life of the communities that we serve by advocating for policies that protect the rights of disenfranchised communities. We do this work through the lens of environmental justice and health equity.

As the President of NAACP - Wicomico Chapter, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, Sentinels of Eastern Shore Health (SESH) and Sussex Health and Environmental Network (SHEN).

Specifically, our community organization will work with the research team to achieve the goals and objectives of the proposed project. We will assist the team in several areas:

- Outreach to and engagement of communities impacted by environmental injustice, and public health issues in the study area
- Sharing materials about the project with our members and networks
- Assist with the dissemination of research results including data, products, and tools with residents, partners, and other stakeholders
- Work alongside communities to promote adaptive governance and community stewardship

In closing, I strongly endorse the proposed efforts of the Enhanced Air Quality Monitoring for Communities. The goals and objectives of the proposed project are consistent with our vision to help

build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life in their communities. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable.

Sincerely,

Amanda Hopkins

Amanda Hopkins,
Wicomico County NAACP President

March 17, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

As the co-founder of Protecting Our Indian River, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. Protecting Our Indian River was established in 2013 in Millsboro Delaware, when our community was faced with an application for a full-scale poultry processing plant within our community. We have many industrial polluting facilities as well as Superfund Sites in close proximity to our community. The proposed site was deemed a Brownfield site, already a contaminated site. We are a diverse community which already has more than our fair share of pollution, with many low income elderly residents, as well as children, who are both vulnerable populations.

We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, Sentinels of Eastern Shore Health (SESH) and Sussex Health and Environmental Network (SHEN).

This project will directly work to increase the awareness and education of our community members, support the use of tools that will measure air quality and work to lessen exposure and work toward policies that consider exposures. Moreover, we support the focus on populations of concern: BIPOC individuals and low-wealth communities who are differentially impacted by exposure to harmful air quality and exposures from ammonia, VOCs and other air pollutants.

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- Assist with the dissemination of research results including data, products, and tools with residents, partners, and other stakeholders
- Assist the research team in recruitment of residents for data collection
- Work alongside communities to promote adaptive governance and community stewardship

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Sincerely,

Representing Protecting Our Indian River (POIR)
Joseph Meyer
28016 Possum Point Rd. Millsboro DE 19966
possumpointer@hotmail.com

March 17, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

As the co-founder of Protecting Our Indian River, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. Protecting Our Indian River was established in 2013 in Millsboro Delaware, when our community was faced with an application for a full-scale poultry processing plant within our community. We have many industrial polluting facilities as well as Superfund Sites in close proximity to our community. The proposed site was deemed a Brownfield site, already a contaminated site. We are a diverse community which already has more than our fair share of pollution, with many low income elderly residents, as well as children, who are both vulnerable populations.

We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, Sentinels of Eastern Shore Health (SESH) and Sussex Health and Environmental Network (SHEN).

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Sincerely,

Representing Protecting Our Indian River (POIR)
Joseph Meyer
28016 Possum Point Rd. Millsboro DE 19966
possumpointer@hotmail.com

March 19th, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger

Sussex Health & Environmental Network (SHEN) is a community-based organization located in Sussex County, Delaware. SHEN was organized in 2018 to address the underlying issues that impact communities, particularly Black, Indigenous and People of Color (BIPOC) and low-wealth communities. We are a collective voice for positive solutions and inclusiveness in representation working towards healthy communities. Our vision of a healthy community includes environmental health, public health,economic health and social health. We do this work through the lens of environmental justice and health equity.

Specifically, our community organization will work with the research team to achieve the goals and objectives of the proposed project and I will serve as co-lead to the project director for Delaware. We will assist the team in all duties in all phases of the project.

In closing, I strongly endorse the proposed efforts of the DE/MD Community Ag Air Emissions Project. The goals and objectives of the proposed project are consistent with our vision to help build capacity in impacted communities and empower residents and other stakeholders to be engaged in decision-making that can improve their health and quality of life and lessen their exposures to work towards a more sustainable future. Your approach that utilizes community science can help the communities that we serve become healthier, more equitable, and more sustainable. I want to wish you and your team the best of luck with this endeavor.

Sincerely,

Michael Payan, Co-Founder
Sussex Health & Environmental Network

KEEP OUR WELLS CLEAN

March 17, 2022

Sherri Dugger
Executive Director
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703

Dear Ms. Dugger,

As the co-founder of Keep Our Wells Clean, I strongly endorse your application for EPA's ARP grant project for Enhanced Air Quality Monitoring for Communities. Keep Our Wells Clean was established in 2016 in Sussex County Delaware, when our community was threatened by millions of gallons of wastewater being sprayed next to our homes. Many of our wells are already contaminated with nitrates. We are a diverse community which already has more than our fair share of pollution, with many low income elderly residents, as well as children, who are both vulnerable populations.

We have a well-established history since our formation with the Socially Responsible Agriculture Project (SRAP), The Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland School of Public Health, and Sussex Health & Environmental Network (SHEN).

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- Work with the research team to learn and implement principles of community-based participatory research (CBPR) to build community capacity to address environmental injustice and environmental health disparities in the communities that we serve

KEEP OUR WELLS CLEAN

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Sincerely,

Anthy Scarpa
Co-Founder
Keep our Wells Clean
Milton, DE 19968

Cover Page

Project Title: DE/MD Community Ag Air Emissions Project

Application information: Socially Responsible Agriculture Project (SRAP), Robyn Hill, 2093 Philadelphia Pike, #4133, Claymont, DE 19703
robynh@sraproject.org, 503-362-8303

DUNS number: 118594624

Set-aside: Community-based Organization set-aside
Description of the Communities Represented: Princess Anne, Somerset County, MD, Millsboro, Sussex County, DE, Seaford, Sussex County, DE. All communities have a significant underserved population and more details can be found in the narrative. SRAP is not a grassroots CBO but works with grassroots CBOs and residents of communities impacted by industrial agriculture and related practices.

Description of applicant organization: SRAP is a national organization that, through education, advocacy, and community organizing, empowers people to protect public health, environmental quality, and local economies from the damaging impacts of factory farms, and to advocate for a socially responsible food future.

Project partners and contact names: University of Maryland Center for Community Engagement, Environmental Justice, and Health (CEEJH), Dr. Sacoby Wilson; Aclima, Davida Herzl: Sussex Health and Environmental Network (SHEN), Michael Payan; Sentinels of Eastern Shore Health (SESH), Monica Brooks (other technical and community partners listed below)

Project locations: Princess Anne, Somerset County, MD, 21853; Millsboro, Sussex County, DE, 19966; and Seaford, Sussex County, DE, 19973

Air pollutant scope: Carbon Monoxide (CO), Nitrogen Dioxide (NO2), Ozone (O3), Particulate Matter (PM2.5), Carbon Dioxide (CO2), Black Carbon (BC), Ethane (C2H6), Methane (CH4)

Budget Summary:

EPA Funding Requested	Total Project Cost
$495,328	$564,118

Project period: January 1st, 2023 - December 31st, 2025

Project description: This project will provide comprehensive ambient air data collection of industrial poultry pollution and its effects on public health and the environment in three Delaware and Maryland communities experiencing environmental injustices. Partners and citizen groups will use this information to create community-oriented solutions including education campaigns and collaboration with local government officials and state agencies to improve public health outcomes for every stakeholder in the community.

1. Project Summary and Approach

A. Overall Project

The DE/MD Community Ag Air Emissions Project proposes to "empower through action" three underserved communities in Delaware and Maryland who are faced with health outcome disparities exacerbated by air pollution generated by large-scale poultry production barns and poultry processing plant waste disposal. These communities include Princess Anne, Somerset County, MD (poultry barn expansion), Millsboro, Sussex County, DE (poultry processing and poultry barns), and Seaford, Sussex County, DE (poultry waste-to-energy and poultry barns). The project objective is to teach community members how to use existing technology to monitor the air quality in their neighborhoods. A Community Advisory Board (CAB) will be created for this project composed of 60% members from the three communities and 40% technical experts from environmental health fields in Delaware and Maryland. The outcome of the project will be to use citizen air quality data to start a robust conversation on solution-based strategies between community and regulatory partners on how agriculture air pollution can be reduced/minimized using the EPA's EJ Collaborative Problem Solving (CPS) Model.

Phase I (Year One): Planning out the details of the Project for Each Community

CAB and Project Leaders *Note: all CAB meetings will be held virtually via Zoom.* (1) Project Leaders host meetings with CAB to review project (2) CAB meets with community groups/technical partners. (3) CAB meets with each community separately to begin tailoring the Project to self-identified goals and activities. (4) Community members learn how to identify, monitor, and evaluate data collected using mobile monitors from Technical Partners: Aclima, a mobile monitoring solutions company, and Dr. Sacoby Wilson, Director, CEEJH, both of whom have experience working with underserved and adversely impacted communities. **Community-Based Organizations (CBOs)** - Each community meets regularly to develop an outreach plan, assign project tasks, identify driver teams for Aclima monitoring, and agree on how to educate and update the community regularly. Aclima meets virtually with each community for training on how to utilize mobile air monitoring vehicles and in person for additional training. Air monitoring starts. **CAB** meets regularly with Project Director and co-leads to facilitate community plan, design, and implementation of air monitoring. Aclima mobile air monitoring occurs during the summer in three communities. Agriculture air pollution is monitored via: (1) mobile air quality monitoring vehicles installed with Aclima monitoring equipment (measuring ambient concentrations of carbon dioxide (CO2), carbon monoxide (CO), nitric oxide (NO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM2.5), black carbon, methane (CH4), ethane, as well as conduct a regional toxics screen across the area, using community workforce development program; (2) follow-up speciated toxics measurements based on regional toxics screen, including ammonia; and (3) air monitoring using a Cerex microHOUND (ammonia). **CAB** hosts a two-day retreat with Project Director, co-leads, technical partners, and community leaders to discuss challenges related to trust, conflict, power, and decision-making. Community leaders develop strategies for addressing issues. Project Director and co-leads, CAB, CEEJH, and Aclima host report back workshops for communities to present progress, data collected, and breakout rooms utilized for increased cross community interaction.

Phase II: (Year Two): Understanding the Air Monitoring Data and Hot Spot Checks

CEEJH, Aclima, Project Director and co-leads meet with CAB to discuss air monitoring results and Final Report. Communities share lessons learned, problem-solving, interpret data, and identify solutions. Communities plan how to use the Cerex microHOUND to spot check hot

spots of ammonia. CAB meets bi-monthly with all stakeholders. CAB hosts a two-day retreat to discuss challenges, issues, and strategize solutions. Project Director and co-leads, CAB, CEEJH and Aclima host reporting workshops virtually or in-person for communities to present progress, data collected, and breakout rooms utilized for increased cross community interaction.

Phase III: (Year 3) Identifying Solutions that Move Forward to Healthy Air

Community and stakeholders identify air pollution sources and hot spots (backed by citizen science data using Aclima and microHOUND) that can be minimized. Phase III efforts focus on solutions to reduce adverse health impacts of underserved communities. CAB continues to meet bi-monthly with community members, Project Director, co-leads, technical partners to fine-tune problem-solving using the EPA EJ CPS Model. CAB hosts (in person) two-day retreat to discuss challenges related to developing stakeholders for the problem-solving portion of the project. CAB and community leaders formalize project finish and identify future activities.

B. Project Significance

Air pollutants generated by poultry barns and poultry processing facilities include particulate matter (PM) and PM/Ozone precursors, such as ammonia and volatile organic compounds (VOCs). People living and working in the vicinity of poultry barns, processing plants, and spray fields are exposed to these pollutants with little to no monitoring or local, state, or federal regulatory oversight. Common adverse health impacts due to exposure to large-scale poultry air pollution include aggravated asthma, headaches, anxiety, and bronchitis.

Maryland: Low-income communities and communities of color are disproportionately burdened by chicken concentrated animal feeding operations (CAFOs) and meat processing facilities across Maryland, making the state's chicken industry an environmental justice concern. Statistical analyses demonstrated that chicken CAFOs are unequally distributed throughout the state, with a disproportionate amount located near low-income communities. On the Eastern Shore, Bernhardt et al. (2015) found 438 chicken operations in Caroline, Dorchester, Somerset, Wicomico, and Worcester counties in 2013, totaling 243,891,955 animals. All five counties are above the state average of people below the poverty level. Only Somerset, however, has a higher African American population (42.3%) and a lower White population (53.5%) than the State of Maryland (29.4% Black and 58.2% White, respectively). Studies have shown that CAFOs are usually developed in existing communities of color and low-income communities, instead of the CAFO attracting these populations. **Delaware:** Even though Sussex County, DE, has more poultry barns than any other county in the US, there is only one National Ambient Air Quality Standards (NAAQS) monitoring station, which is not located in an area that would measure poultry impacts. One of the expected outcomes is to provide citizen science data to justify an additional NAAQS monitoring station. According to CEEJH, Sussex County, Delaware is ranked first in the US for broiler chicken production. Each year, over 600 industrial operations in Sussex County produce approximately 200 million chickens. Many impacted residents have reached out to SRAP and CEEJH and formed grassroots groups and built partnerships. In the past decade, many members have spoken at county zoning meetings, submitted public comments at permit hearings, contacted their local officials and regulatory agencies, worked with other CBOs and national organizations, and pursued legislation and agency rule-making. SRAP, Sussex Health & Environmental Network (SHEN), Sentinels of Eastern Shore Health (SESH), and CEEJH are currently using citizen science to trace microbial pollution to the source in the Delmarva Rural Agriculture Citizen Engagement Sampling Project (DRACESP).

This project addresses Goal 4 of EPA Strategic Plan as follows: ***Goal 4*** *- Ensure Clean and Healthy Air for All Communities,* ***Objective 4.1*** *- Improve Air Quality and Reduce Localized Pollution and Health Impacts.* This project will continue our data gathering of industrial poultry pollution and its effects on public health and the environment in fenceline communities. Grant funding will allow us to gather data on pollutants, like VOCs, and enable us to collect real time data of ammonia. Partners and citizen groups will use this heightened understanding to create community-oriented solutions that will reduce exposure through creating awareness, such as educational campaigns directed at reducing exposure and collaborating with local government officials and state agencies to improve outcomes for every stakeholder in the community.

Partner:	Project Role:	Expertise & Resources:
Socially Responsible Agriculture Project (SRAP)	Oversee Project Partners, Coordinate and Facilitate Meetings with Community Advisory Board, Facilitate Community Education/Awareness Meetings, Data Management, Expense Management	Organizing, Experience in CPRP, Decade working with Partner Groups, Co-leads, CEEJH, Non-profit has Experience in Overseeing, Managing Large Grant Projects
Community Partner Co-Leads		
Sussex Health & Environmental Network (SHEN)	Educational Meetings, Data Collection, Community Engagement, Collaboration with Aclima and CEEJH on Evaluation of Data Results, Proposals on Short-Term, Mid-Term, and Long-Term Actions & Outcomes, Delaware Co-Lead	Relationships with Delaware Partner Groups, CEEJH and CBPR, Digital communication, Design experience, Run Large Projects/Campaigns in Delaware
Sentinels of Eastern Shore Health (SESH)	Educational Meetings, Data Collection, Community Engagement, Collaboration with Aclima and CEEJH on Evaluation of Data Results, Proposals on Short-Term, Mid-Term, and Long-Term Actions & Outcomes, Maryland Co-Lead	Relationships with Maryland Partner Groups, CEEJH and CBPR, digital communication, design experience,run large projects/campaigns in Maryland
Other Community Partners		
CATA Farmworkers Support (CATA)	Outreach & Engagement, Workforce Development, Dissemination of Research Results, Recruitment of Residents for Data Collection, Translation Assistance for Outreach and Meetings	Grassroots, Membership-based Organization Working w/ Farmworkers & the Latino Immigrant Community
Concerned Citizens Against Industrial CAFOs (CCAIC)	Outreach & Engagement, Workforce Development, Dissemination of Research Results, Recruitment of Residents for Data Collection;	Grassroots Citizens Group Strong on Environmental Justice Issues in Maryland, Outreach
Keep Our Wells Clean (KOWC)	Outreach & Engagement, Workforce Development, Dissemination of Research Results, Recruitment of Residents for Data Collection;	Grassroots Citizens Group Strong on Environmental Justice Issues in Delaware, Outreach
Protecting Our Indian River (POIR)	Outreach & Engagement, Workforce Development, Dissemination of Research Results, Recruitment of Residents for Data Collection;	Grassroots Citizens Group Strong on Environmental Justice Issues in Delaware, Outreach
Wicomico County National Association for the Advancement of Colored People	Outreach & Engagement, Workforce Development, Dissemination of Research Results, Recruitment of Residents for Data Collection;	Non-profit Strong on Environmental Justice Issues in Maryland, Outreach
Technical Partners		
Sacoby Wilson (CEEJH)	Data Analysis, Report for CAB,Presentation on Findings to Community Members,Annual Seminar	Public Health Expertise, Exposures, Environmental Justice, Research,CBPR
Aclima	Data Monitoring, Workforce Development, Establish Baseline of Ambient Concentrations, Assistance in Mitigation Solution Identification	Pollution Mapping Expertise, Accelerating Community Emission Resolution Plans, Experts in Hyperlocal Air Pollution and Greenhouse Gas Mitigation

2. Community Involvement

a. Community Partnerships The table provides details on the partnership between SRAP, SHEN, SESH, Aclima, and CEEJH. Community, advocacy, and technical partners described will be assisting with activities outlined to achieve project objectives. More information on groups attached.

b. Community Engagement In Phase I, as part of the community engagement plan, the team will primarily use the community-based participatory research (CBPR) framework and the US EPA EJ CPS model. Dr. Wilson (technical partner) has extensive experience using both in his work as shown by his resume and his extensive publication record and will help guide the team in the use of CBPR and the EPA EJ CPS model.

Community Advisory Board (CAB). The team will establish a community advisory board (CAB) consisting of community members from community partners in both Delaware and Maryland. Actualizing the principle that CBPR builds on the strengths and resources of the community, the CAB will play a major role in the proposed project. If funded, the CAB will be engaged in all stages of the research process including development of study design, methods, implementation, review, and dissemination. As part of project activities, the CAB will meet quarterly with the team to provide feedback on study design and CBPR issues. The CAB will

also provide input via monthly conference calls and emails. In addition, the CAB will host yearly two-day retreats with the team to discuss issues and challenges related to trust, group conflict, power, and shared decision-making. We will discuss and select strategies for addressing these issues. The CAB will also help address any cultural concerns, language concerns, and compensation for study participants. CAB members will receive $2,000/year.

Building Equity into the Partnership. In CBPR, it is critical for partners to agree upon the terms of collaboration and ensure equity between partners including addressing social inequality. Studies have shown that there are power imbalances between researchers and community partners. To address these issues, the CAB will play a pivotal role in informing how the partnership operates and how the study is implemented. In collaboration with the SESH and SHEN, we will develop MOUs that will outline the terms of collaboration, including: (1) co-design (and redesign as needed) of study questions, framework, and methods; and (2) co-generation of deliverables, data ownership, data sharing, and dissemination. As part of these MOUs, we will encourage community partners to outline their specific roles and responsibilities.

Communication with Partners. In CBPR, trust is an essential component of successful community-university partnerships. Constant, consistent, bidirectional and open communication is essential for building trust. The research team will host monthly web meetings with partners including the CAB to discuss issues related to the project. In addition, there will be internal communication activities to ensure community leaders, board members, and partners are aware and understand what is occurring with project-related activities. These activities include regular check-ins; a Google Calendar to ensure that all activities, projects, and events are featured on a yearly calendar that can be electronically accessed; use of Microsoft Project to enhance the ability of project staff and volunteers to collaborate on project objectives.

Community Science Training. In Phase I, SRAP will work with SESH and SHEN to develop and implement a community science training program to help train local residents from communities of concern about the air quality and health impacts of industrial chicken farming, biogas plants, and related activities. The team will work with CEEJH to develop a workshop series to increase knowledge and awareness about these sources. In addition, participants will learn about stationary and mobile monitoring approaches including Aclima's mobile monitoring system and about how to develop their own air quality monitoring plans. Trainees will also have the opportunity to receive training on ammonia monitoring technology. After completing this training, trainees will support efforts to implement activities outlined in Phase I and II activities.

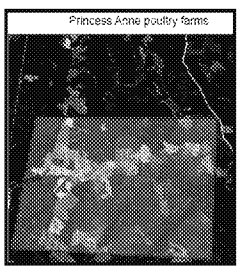
Community-Based Air Quality Monitoring Plan Development. During Phase II, the project director and community co-leads will work with members of SESH and SHEN, other residents, CEEJH, and Aclima to co-develop a community-based air quality monitoring plan. This process will leverage the community-based environmental monitoring work that is a part of the Delmarva Rural Agriculture Citizen Engagement Sampling Project (DRACESP). In a series of meetings, residents in communities of concern in both Delaware and Maryland will work with project partners to discuss the best routes for mobile monitoring using the Aclima technology and the best stationary locations and routes for ammonia monitoring using the Hound. The CAB will also provide feedback on the community-based air quality monitoring plans in each area.

Use of the EPA EJ CPS Model. In Phase III of the project, the team will implement EPA's EJ CPS model. The team will engage with regulators, county and state officials, policymakers, and other stakeholders to develop solutions-based strategies informed by the air quality data collected during Phase II activities. The CAB will act as the steering committee for the CPS structure. During Phase III, the team will host a series of dissemination meetings with impacted residents

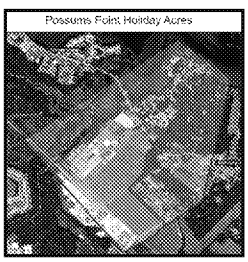
and government officials to discuss mitigation, source reduction, exposure reduction, public health, and policy solutions. The use of the CPS model will help the team ensure the long-term sustainability of the partnership and implementation of solutions beyond the grant period. **Community-Based Organization Set-Aside** *Note: SRAP is not a grassroots CBO, but works in coordination with grassroots CBOs and residents of communities impacted by industrial agriculture and related practices.* **Delaware:** SRAP first engaged with Protecting Our Indian River (POIR) in 2013 when concerns about redevelopment of a former seasonal pickle plant, now a brownfield, was planned to site a poultry processing plant in a low-income minority community. Keep Our Wells Clean (KOWC) was formed in 2016 when the community reached out to SRAP for help opposing a sprayfield waste project near their community. Currently, SHEN is working in conjunction with CEEJH and Delaware Partner Groups on the Delmarva Rural Agriculture Citizen Engagement Sampling Project. **Maryland:** SRAP and CEEJH first became involved with Concerned Citizens Against Industrial CAFOs (CCAIC), Wicomico County NAACP, and CATA Farmworkers Support in 2015 when a 13-house CAFO was proposed in a BIPOC community suffering from high levels of asthma and other industrial pollution. Our project partners, co-leads, and the CEEJH team are actively involved in Sussex County, Delaware and the Lower Eastern Shore of Maryland and have been for almost a decade. This project will expand upon the present work of DRACESP.

3. Environmental Justice and Underserved Communities

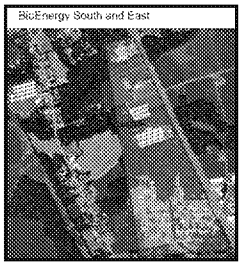
We used USEPA EJSCREEN 2.0 mapping tool to generate EJ Index scores for rural communities exposed to agricultural pollution from poultry barns, poultry processing plants, and a waste-to-energy facility and composting site using poultry litter and processing waste.



1. Multiple Poultry Barns - Princess Anne, Somerset County, MD Of the 584 people living near a massive poultry complex, 73% are People of Color (POC) with a per capita income average of $14,085. Percentile rankings of concern include ozone (92), air toxics respiratory (84), and air toxics cancer (80). Just west of the poultry barns is the town of Princess Anne (pop. 7546) where 71% of the residents are POC and the per capita income is $17,069. University of Maryland Eastern Shore (HBCU)) is less than 2 miles from the massive poultry complex of over 30 poultry barns.



2. Mountaire Poultry Processing – Millsboro, Sussex County, DE Of the 731 people living south of Mountaire poultry processing plant, 30% are POC of which 11% are Hispanic, 19% are over 65, and per capita income average is $20,009. These communities are near a Superfund Site (90 percentile) with Possum Point and Holiday Acres neighborhoods exposed to air and water pollution from two poultry processing plants waste treatment and disposal methods. Nearly 3,900 people live within 2 miles with 42% POC who are subjected every day to spray irrigation of millions of gallons of poultry wastewater on 928 acres of land throughout the community.



3. BioEnergy Digester/Compost Poultry Litter and Processing Sludge – Seaford, Sussex County, DE Of the 827 people living east and south of BioEnergy, 41% are POC of which 14% are Hispanic, 34% are younger than 17, 15% over 65, and per capita income average of $23,855. Percentile rankings of concern include air toxics respiratory (84), education less than high school (80), low income (93), and underage (94). Within a 2 mile radius, 3,500 people with 35% POC (11% Hispanic) are exposed to air emissions from 40 poultry barns in the community in addition to the Digester/Compost facility.

4. Environmental Results – Outputs, Outcomes and Performance Measures

Performance Measures and Plan. Project Director and co-leads will meet with the CAB monthly and communicate through email with technical partners, consultants, and co-leads for each state to evaluate performance measures, outputs, and outcomes, and course correct as needed.

Outputs by Phase		Outcomes		
Phase	Output	Short-Term	Intermediate	Long-Term
Phase 1	Outreach Meeting	Increase Community Awareness	Partnering w/ Policy, Health allies	Lessen Exposure
	Data Monitoring	Increased Knowledge of Data Collection	Plan to Share Data w/ Schools	Lessen Exposure to school children
	Data Reporting	Broaden Capacity	Plan to Present to Gov't Agencies	Increased Scrutiny of Permit Approvals
Phase 2	Community Outreach for MicroHOUND Training	Understanding of Ammonia Exposure	Community Requests Health Assessment	Greater Setbacks in Zoning Approval
	Report on Data to Community	Community Letter Campaign to Educate Public	Community Action to Request Inspections	Increased Monitoring by State
	Seminar w/ Work Sessions	Increased Knowledge on Tools for Community	Create County Advisory Committees	Greater Involvement in Decision-Making Process
Phase 3	Outreach Meeting/Workforce Recruitment/Data Sharing	Expand Knowledge to Greater Number of Participants	Brainstorm for Messaging Community Events	Increased Enforcement
	Seminar w/ Livestreaming/Experts/Final Reports	Full Understanding of Pollution Exposures	Community Final Report to Media	Public Exposure Data Forces Action to Mitigate Pollution
	Sustainability Meeting	Action-Oriented Groups Created	community planning to continue new CEHP project	Lessen Exposure to Increase Community Health

Timeline and Milestones

Phase	Activity	Month
Phase 1	CAB Establishment Meeting	1
	CAB Meeting w/ Aclima, CEEJH, Project Leads: Development of Study Design, Implementation Plan, & Outreach Plan	2
	Virtual Outreach Meeting for Training for Community Based Science w/ CAB, All Partners, Project Directors & Leads in Project	3
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR issues	4
	Workforce Development Training w/ Aclima for Community Drivers	4
	CAB Meeting w/ Project Leads & Technical Partners	5
	CAB Meets w/ Aclima for Finalization of Data Monitoring Plan & Community Driver Training	6
	Data Monitoring by Aclima Community Drivers	7-9
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR issues	8
	CAB Annual 2-Day Retreat	9
	Data Analysis & Report Completed & Shared w/ CAB & Project Partners at Virtual Meeting	10
	Annual Webinar w/ Speakers & Work Sessions CAB, All Partners, Project Directors, Leads in Project & Public	12
Phase 2	Community Outreach Training Meeting w/ MicroHOUND	13
	Data Collection w/ Community Partners Using MicroHOUND	14-15
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR issues	14
	Data Analysis & Report Completed & Shared w/ CAB & Project Partners at Virtual Meeting	16
	Community Outreach Training Meeting w/ MicroHOUND	17
	Data Collection w/ Community Partners Using MicroHOUND	18-19
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR issues	18
	CAB Annual 2-Day Retreat	21
	Data Analysis & Report Completed & Shared w/ CAB & Project Partners at Virtual Meeting	21
	Annual Webinar w/ Speakers & Work Sessions CAB, All Partners, Project Directors, Leads in Project & Public	23

	Community Outreach Training Meeting w/ MicroHOUND	25
	Data Collection w/ Community Partners Using MicroHOUND	26-27
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR Issues	26
	Data Analysis & Report Completed & Shared w/ CAB & Project Partners at Virtual Meeting	28
	Community Outreach Training Meeting w/ MicroHOUND	29
Phase 3	Data Collection w/ Community Partners Using MicroHOUND/Aclima	30-31
	CAB Meeting w/ Project Leads & Technical Partners on Data Collection, CEnR plan, CBPR Issues	30
	CAB Annual 2-Day Retreat	33
	Data Analysis & Report Completed & Shared w/ CAB & Project Partners at Virtual Meeting	33
	Annual Webinar w/ Speakers & Work Sessions CAB, All Partners, Project Directors, Leads in Project & Public	35
	Virtual Sustainability Meeting: Next Steps w/ All Partners	36

5. Quality Assurance Statement See Attachment

6. Programmatic Capability and Past Performance

Past Performance: Though this is SRAP's first application for funding from a federal agency, the organization has more than 20 years of experience managing successful grant programs with philanthropic foundations that have ranged from $5,000 grants to more than $1.5 million in funding awards. Successful grant programs have included: **Poultry Pollution Project:** Funds were received from Fidelity Charitable Trust to expand its campaign fighting industrial poultry pollution and the effects on public health and the environment in vulnerable communities. Goals of the program included transformational capacity building, frontline community empowerment, citizen engagement and science, and advancement of long-term systemic change through advocacy. **Empowering Rural Communities to Fight Back:** Goals for this program, funded by the Schmidt Family Foundation, included expanding SRAP's Water Ranger program to train rural residents to monitor waterways to detect pollution and report violations, empowering community scientists to gather their own data to hold polluters accountable, and conducting webinars to teach impacted community members skills such as crafting effective public comments and navigating government websites to find important CAFO information. CEEJH has led numerous successful projects utilizing funding from various federal agencies including the EPA, NSF, NIH, NIEHS, NIMHD and DNR. See following example: **Building Community Resilience to Natural-Disaster-Driven Contaminant Exposures Through System-Level Risk Analysis, Management, and Readiness,** USEPA, Grant Number 84004101; Subaward: 343-101. They have established a community-university partnership between REACH, LAMC, UMD (CEEJH), and Duke University. MOUs have been signed between partners and a CAB has been established. Team members have collected data on environmental hazards in Duplin County, NC and Charleston, SC and modeled potential flood risks and impacts on vulnerable residents who live in communities with EJ issues.

Reporting Requirements

SRAP received funding for both the **Poultry Pollution** and **Empowering Rural Communities** grants, and, for each, regular reporting was required, with six-month and end-of-year reports submitted on the accomplishments, challenges, course corrections, and long-term successes achieved. Quarterly check-in calls and reports are also a regular part of SRAP's larger general operating expense grant award programs. These reports always include the outcomes and impacts of programmatic work, details on state, regional, and national collaboration, research and resource material development, as well as program, financial, board, and team development. CEEJH received funding for the **Building Community Resilience to Natural-Disaster-Driven Contaminant Exposures Through System-Level Risk Analysis, Management, and**

Readiness. Reporting for this project is completed and submitted to the EPA annually. The reports consist of updates on community engagement progress, hydrological models, and other products.

Staff Expertise (All Resumes are in Attachments)
Maria Payan, Project Director, is the SRAP Senior Regional Representative. Maria has two decades of experience in community organizing and will work with all stakeholders. As Project Director, she will continue and advance the CBPR project and campaigns to protect overburdened communities with the community input in the decision-making process.
Aclima is the technical partner for this project and will lead the monitoring campaign, designed to support the community with data and transparency to establish a baseline of ambient concentrations and help identify impactful actions. Aclima developed peer-reviewed methodologies in collaboration with the US EPA and academic institutions for the generation of baseline maps showing and characterizing persistent pollution hotspots and has ample experience in this work through partnerships with communities across the country.
Michael Payan, Sussex Health and Environmental Network (SHEN), will serve as the Delaware co-lead, supporting the Project Director working with partners to achieve project objectives. Michael and SHEN have ongoing long-term relationships with the listed Delaware partner groups, CEEJH and community-based participatory research.
Monica Brooks, Sentinels of Eastern Shore Health (SESH), will serve as the MD co-lead for this project, assisting the Project Director working with partners to achieve project objectives. Monica/SESH have long-standing relationships with the listed MD partner groups and CEEJH.
Sacoby Wilson, PhD, is an Associate Professor at the Maryland Institute for Applied Environmental Health, School of Public Health, UMD-College Park, where he directs the Center for Community Engagement, Environmental Justice, and Health (CEEJH). He has 25+ years of experience as an EJ advocate and 20+ years of experience as an environmental health scientist in exposure science, air quality monitoring, GIS mapping, and CAFOs. He will act as a technical expert on this project.

7. Budget Detail and Chart
Personnel: Project Director: Maria Payan, Senior Regional Representative with SRAP, will serve as the Project Director and will be responsible for implementation of the project goals, objectives, activities, and providing needed information for reporting requirements. The Project Director will coordinate with project partners to execute all project activities. The PD will operate at 15% FTE for the project, 15% of $65,720 FTE = $9,858 annually for a project total of $29,574. Project Administrator: Robyn Hill is the Development Manager for SRAP and will serve as the Project Administrator. Robyn will be responsible for oversight of the Project Director's work in implementation of the project goals and objectives and working with the grant consultant for reporting requirements. The PA will operate at 5% FTE for the project, 5% of $72,000 FTE = $3,600 annually for a project total of $10,800. Financial Administrator: Katie is the Operations and HR Director for SRAP and will serve as the financial administrator for this project, working with the PD to manage the financial tracking and bookkeeping and financial reporting of this project in collaboration with the grant consultant. The FA will operate at 5% FTE for the project 5% of $74,200 FTE = $3,710 annually for a project total of $11,130. **Total grant ask for personnel: N/A. Total in-kind contributions: $51,504 for 3 years.**

Fringe Benefits: Fringe benefits are estimated at 19% for insurance, retirement contributions, worker's comp., and unemployment. PD fringe: $29,574 at 19% = $5,619; PA fringe: $10,800 at 19% = $2,052; FA fringe: $11,130 at 19% = $2,115. **Total grant ask for fringe for 3 years: N/A. Total in-kind contributions: $9,786 for 3 years.**
Travel: We are requesting travel funds for the PD to travel to meetings and project related events, 300 mi/yr x 3 yrs x 58.5 cents. **Total grant ask for Travel for three years: $527.**
Equipment: Equipment includes the Cerex Hound for pollutant monitoring and related parts. Per the Cerex Monitoring Solutions Distributor Guide (see attachment) the Micro Hound will cost $36,225; UV lamps, $1,135; Air inlet filter, $104 (for two); GPI technology, $100; Micro Hound FR case, $1,310; and external battery, $2,374. **Grant ask for Equipment for 3 years = $41,248.**
Supplies: Print materials are for project promotion and education materials including flyers, reports, hand-outs and includes translated materials. We estimate approximately $1,667 annually for the materials. **Grant ask for Supplies for 3 years = $5,000.**
Contractual: *For this project, SRAP is seeking contractors who have trusted working relationships with the affected community members and other partners and proven track records for advocating for rural communities, especially in regard to public health impacts of concentrated animal feeding operations.* Co-lead Support - DE and MD: We will hire two contractors, one in DE and one in MD, to provide the PD with direct support for the duration of the project, specifically in regards to the following scope of work: educational meetings, data collection, community engagement, collaboration with other partners. We will pay two contractors ea. at a rate of $20/hr. for 8 hrs./wk for a total of 156 weeks. **Total grant ask for Co-leads: $49,920.** Hound Drivers: We will hire drivers who know these communities well to drive the Hound equipment and will engage community members at each site through this testing, estimated at 480 hrs total for $20/hr. **Total grant ask for drivers: $9,600**. Translation Services: We will hire a qualified translator TBD to translate essential information and documents for Spanish and Haitan speaking community members at a rate of $1,090/yr. **Total grant ask for Translation Services: $3,270.** Technical Partners: Estimates from potential technical contractors, Dr. Sacoby Wilson and Aclima, are as follows: Dr. Sacoby for support with data analysis, evaluation reports/presentations for CAP and communities: $25,000/year for three years = $75,000. Estimated expenses for Aclima for data monitoring, workforce development, mitigation solution identification total $49,590/year for three years = $148,770. **Total grant ask for Technical Partners: $223,770**. Grant Consulting: Prosperity Ag, a third-party grant consultant, will provide general program compliance and will oversee reporting requirements. Detailed reporting timelines and requirements will be provided to the project team to complete on a monthly basis. Bi-monthly check in calls will be completed with SRAP staff, the project director, and any other key personnel. Approximately 10 hours/month at a rate of $85/hour. **$10,200 per year x 3 = $30,600 total grant ask for Grant Consulting for 3 years. Total grant ask for Contractual for 3 years = $317,160**
Other: CAB Committee Members Stipends: We will select committee members from the communities of impact to serve on the community action board and provide a stipend for their participation. $2,000 x 5 members x 3yrs. **Grant ask for CAB: $30,000.** Partner Groups Stipends: We will provide stipends to our 6 community partner organizations for their time and assistance with project goals (does not include our co-leads or technical partners). 6 partners x $500 per year x 3 yrs. **Grant ask for Partner Groups: $9,000.** Travel - Pollutant Testing/Monitoring: Hound Testing equipment will travel within the three communities to test

for pollutants twice during this grant for over a course of twelve total weeks. Travel for Hound Testing is estimated at a total of 28,800 miles over three years at 58.5 cents/mile. **Grant ask for Monitoring Travel: $16,848:** Travel - Partners: We will provide mileage reimbursement for Co-leads and Technical Partners. Mileage for Co-leads: 3,900 total miles at 58.5 cents/mi x 2 = $2,281. Travel for Dr. Wilson to project events = 400 total miles at 58.5 cents/mile = $234. **Grant ask for Partner Travel: $2,515.** Graphic Design and Digital Marketing. We will hire a graphic designer to create accessible materials including reports, presentations, flyers and a digital marketing and social media specialist to help with digital project promotion and disseminating information in online and outreach platforms. **Grant ask for Graphic Design and Digital Marketing: $14,000.** Events and Meetings: We will host a variety of events and meetings, virtual or in-person, for different constituencies of the project. Fees will be for room rentals, speaker fees (speakers TBD), and A/V. Seminars: $3,000 x 3; State meetings: $1,667 x 3; CAB Summits (discussing project progress, results, and building coalition work): $7,500 in-kind for 6 total retreat days for room and board. In-kind total contribution for Events: $7,5000. **Grant ask for Events for three years: $14,000. Other grant ask total for three years: $87,602**

Indirect charges

We are requesting 10% in indirect costs. **10% of $450,298 = $45,030**

Line Item & Itemized Cost	EPA Funding**
Personnel	
PD $65,720 @ 15% FTE= $9,858 x 3 yrs. = $29,574	N/A
PA $72,000 @ 5% FTE = $3,600 x 3 yrs. = $10,800	N/A
FA $74,200 @ 5% FTE = $3,710 x 3 yrs. = $11,130	N/A
TOTAL PERSONNEL	N/A
Fringe Benefits	
PD fringe: $29,574 at 19% = $5,619	N/A
PA fringe: $10,800 at 19% = $2,052	N/A
FA fringe: $11,130 at 19% = $2,115	N/A
TOTAL FRINGE BENEFITS	N/A
Travel	
PD travel 300 mi/yr x 3 yrs x 58.5 cents	$527
TOTAL TRAVEL	$527
Equipment	
Micro Hound and related parts	$41,248

TOTAL EQUIPMENT	$41,248
Supplies	
Project promotion and education materials	$5,000
TOTAL SUPPLIES	$5,000
Contractual	
Co-leads $20/hr., 8 hrs./wk, total of 156 wks.	$49,920
Hound drivers 480 hrs total for $20/hr	$9,600
Translation services $1,090/yr.	$3,270
Technical support	$223,770
Approx. 10 hrs./month at $85/hour. $10,200/yr.	$30,600
TOTAL CONTRACTUAL	317,160.00
Other	
CAB stipends $2,000 x 5 members x 3yrs.	$30,000
Comm. partner stipends 6 x $500/ yr. x 3 yrs.	$9,000
Hound mileage 28,800 mi. at 58.5 cents/mi.	$16,848
Partner mileage 4,300 mi. at 58.5 cents/mi.	$2,515
Graphic Design, Digital Marketing	$14,000
Events - rentals, speaker fees, A/V	$14,000
TOTAL OTHER	$86,363
TOTAL INDIRECT	$45,030
TOTAL FUNDING	$495,328
TOTAL PROJECT COST ††	$564,118

Expenditure of Awarded Funds

SRAP has a proven track record of successful management of large grants. The PD will work with other SRAP administrative staff as indicated in the budget detail as well as project co-leads, consultants, and technical partners to ensure timely and efficient project management and reporting. This project has extensive planning for regular meetings and communication between partners, a board oversight committee, and our administration practices ensure several checks and balances are in place to appropriately manage restricted funds received through grant programs. SRAP received a full financial audit in 2022, with plans to undergo regular audits to ensure compliance with laws and regulations and to maintain accurate records and appropriate data collection and reporting procedures.

Kathy J. Martin - Curriculum Vitae

Ex. 6 Personal Privacy (PP)

Education	B.S. in Petroleum Engineering, University of Oklahoma 1987 M.S. in Civil Engineering, University of Oklahoma 1989
Thesis:	Removal of Polychlorinated Biphenyls from Topsoil Using Nonionic Surfactants, University of Oklahoma 1989
Training	NPDES Permit Writer's Training, University of Texas-Arlington CAA Title V Permit Writer's Training, University of Texas-Arlington

Professional Experience

1997-date	Martin Environmental Services – Focus on animal feeding operation wastewater permitting (AFO/CAFO); state AFO/CAFO rule-making; county zoning regulations and ordinances; state water rights permit appeals; agriculture air quality issues; state and county permit appeals including public comments and testimony; and educational webinars. Worked in 25 states for the past 24 years assisting communities with permit appeals including accessing state permit documents, evaluating regulations and guidance materials, developing public comments, and participating in public hearings. State Environmental Rule-making in OK, KS, NE, CO, IN, and NM
1996-1997	Martin Environmental Services – Focus on Air Toxics permitting and SARA Title 3 reporting for Foundry and Metal Casting Facilities
1993-1996	Engineer II – Oklahoma Department of Environmental Quality Customer Assistance Program duties included multi-media (air, water, land) Compliance and Permit Assistance for industries in Oklahoma. Oversaw state-wide educational program under Clean Air Act Amendments of 1990 Small Business Assistance for hazardous air pollutants (HAPs) with dry cleaners and trailer fabricators.
1990-1993	Engineer I - Oklahoma Water Resources Board Water Quality Division Created Oklahoma state regulations for non-hazardous industrial wastewater disposal by surface impoundment and land application; drafted non-discharge industrial permits; reviewed closure plans for industrial wastewater impoundments; Project Officer of the Tar Creek Superfund Site overseeing Roubidoux Aquifer monitoring program.
1988-1989	Intern Oklahoma Water Resources Board Water Quality Division

CURRICULUM VITAE

Name: **Mohammad N. Akhter, M.D., M.P.H.**

Contact information:

Ex. 6 Personal Privacy (PP)

Professional Experience

05/2003- 05/2017 **Professor, Community and Family Health**
Howard University College of Medicine
Washington, DC20059

07/2012-06/2014 **Member and**
Chairman of the Health Benefits Authority
Executive Board Washington, DC

Health Benefits Exchanges are the main administrative authorities, established under the Patient Protection and Affordable Care ACT, to implement health care reforms in every state in the US.
DC Health Benefits Authority is responsible for the implementation of Affordable Care Act in Washington DC. This involves setting up of Organizational structure and the capacity to offer affordable health insurance to uninsured individuals, employee of small businesses and congressional staff.

01/2011-07/2013 **Director, DC Department of Health**
Washington DC 20002

The Department is responsible for planning, implementing and evaluating a wide range of public health services for the residents of Nation's capital with staff of 1100 employees and 272 million dollar budget.
These services include licensing and certification of all health professionals and all health facilities, Planning and evaluation of health services, funding of primary care and preventive services, Oversight of Emergency medical services and Emergency preparedness, Alcohol and drug abuse prevention and treatment and care and treatment of HIV/AIDs population.

Professional Experience (Continued)

05/2003-05/2005 **Senior Associate Dean for Public And International Health**
Howard University College of Medicine
Washington, DC

The Senior Associate Dean was responsible for the development and implementation of educational, research, and service programs in the College of Medicine with special emphasis on elimination of racial and ethnic health disparities and improvement of health status of underserved populations.

05/2006-9/2009 **Executive Director**
National Medical Association
Washington, DC

05/2005-04/2006 **President and Chief Executive Officer**
American Council for Voluntary International Action (InterAction)
Washington DC

01/1997-12/2002 **Executive Director**
American Public Health Association
Washington, DC.

07/1994-12/1996 **Senior Advisor to the Agency for Healthcare Research and Quality**
United States Department of Health and Human Services, Washington, DC

11/1991-06/1994	**Commissioner of Public Health** **Washington, DC**
07/1987-06/1991	**Dean** **College of Community Medicine** **Professor and Chairman** **Department of Public Health and** **Hospital Administration** Lahore, Pakistan
07/1984-06/1987	**President and Medical Director** **Missouri Patient Care Review Foundation** Jefferson City Missouri
07/1980-06/1984	**Missouri State Government** **Director, State Department of Health** **Deputy Director for Medical Affairs,** **State Department of Mental Health** Jefferson City, Missouri
05/1978-06/1980	**Director** **Michigan Division of Emergency Medical Services**
09/1976-03/1978	**Director Division of Emergency Medical Services and Highway Safety** Springfield Ill ions

Qualifications

Degrees Earned:	M.D. King Edwards Medical College Lahore, Pakistan M.P.H. (Masters of Public Health) The Johns Hopkins University Baltimore, Maryland
Board Certifications:	American Board of Preventive Medicine

Medical Licenses: State of Maryland
And
Washington, DC

Academic Appointments:

- Adjunct Professor, Department of Global Health George Washington University School of Public Health, 1999-2004
- Clinical Professor, Department of Community and Family Medicine Georgetown University School of Medicine Washington, DC 1994-2005
- Senior Associate Dean for Public and International Health Howard University College of Medicine Washington, DC 2003-2005
- Professor Department of Family and Community Medicine Howard University College of Medicine Washington, DC 2006-2017
- Professor Health Services Management School of Pharmacy, Nursing and Allied Health Sciences, Howard University, Washington DC 2009-2011(WOC)

Publications

1. "Comparative Effectiveness Research and the Future Practice of Medicine". Journal of the National Medical Association December 2009

2. "Social Immunization: Public Health Approach for the Management of Substance Abuse". Journal of the National Medical Association November 2009

3. "Technology Assisted Management of Posttraumatic Stress Disorder in Nonmilitary Personnel Returning from the War Zone by Family Practitioners". Journal of the National Medical Association August 2009

4. "The Case for Standardized Course and Examination on Cultural Competence" Journal of the National Medical Association July 2009

5. "National Medical Association Health Policy Priorities: Health Care Reform Agenda" Journal of the National Medical Association March 2009

6. "Future of Health Services", a chapter in Health Services in Africa, 2008, London, England: Adonis & Abbey

7. "Ethics in Public Health," American Journal of Public Health, July 2002. Mohammad N. Akhter, M.D., M.P.H

8. "Universal Health for All or Health for a Few?" American Journal of Public Health, December 2002.

9. "The Role of Public Health Associations" in Critical Issues in Public Health, C. Edward Koop, Editor, 2001.

10. "Health, Pakistan, and Globalization," American Journal of Public Health, January 2001, with Gregory Pappas.

11. "Professionalizing the Public Health Workforce: The Case for Certification," Journal of Public Health Management and Practice, July 2001.

12. "Human Rights: The Foundation of Public Health Practice," American Journal of Public Health, May 2000, with Rosalea Rodriguez-Garcia.

13. "It's Time We Became a Profession," American Journal of Public Health, June 2000, with Alfred Somers.

Publications (continued)

14. "The Past and Future of National Comprehensive Tobacco Control Legislation," American Journal of Public Health, November 1998.

15. "A Pilot Syringe Exchange Program in Washington, DC," American Journal of Public Health, Washington, DC, February, 1994, with David Vlhov, PhD., Caitlin Ryan, Sylvia Cohn, and Maude R. Holt.

16. "Assessment of Inadequately Filtered Public Drinking Water, Washington, DC, December 1993," Journal of the American Medical Association, November 9, 1994.

17. "Coronary Artery Bypass: Missouri's Experience—A Case Study in the Public Release of Sensitive Data", Missouri Medicine, January 1987, with Dan Jaco, M.S.P.H., and Elder, M.D.

18. "HCFA's Plan for Implementation of the Medicare Second Opinion Program," Missouri Medicine, February 1987.

19. "Denial of Payment to Physicians for Poor Quality Care", Missouri Medicine, March 1987, with Dan Jaco, M.S.P.H.

20. "Cost Effectiveness of Screening for Anti-HBC in Institutions for the Mentally Retarded," American Journal of Mental Deficiency, September 1987, with Mark Van Tuinen, Ph.D., Robert Metzger, Ph.D. and John Goins.

21. "New Scope of Work Signals Emphasis on Quality", Missouri Medicine, July 1986, with Dan Jaco, M.S.P.H.

22. "Peer Review Program in the State of Missouri", Missouri Medicine, January, 1985

23. "Pre-admission Certification Program", Missouri Medicine, February 1985

24. "PRO Review of Hospital Admissions of Medicare Patients", Missouri Medicine, March 1985

25. "Implication of PRO Denials for Missouri Hospitals and Physicians", Missouri Medicine, May 1985

26. "Quality Assurance under the PPO Program", Missouri Medicine, June 1985.

Publications (continued)

27. "Hepatitis B Screening and Vaccination in a Facility for the Mentally Retarded", Missouri Medicine, July 1985, with Carolyn Stout, M.P.H., and John Twiehaus, M.P.A.

28. "Physicians' Guide to Becoming More PRO-Active", Missouri Medicine, August 1985, with Thomas E. Mangus, BA, and Dan Jaco, M.S.P.H.

29. "PRO Release of Information and Its Implications for Physicians and Hospitals", Missouri Medicine, November 1985.

30. "Evaluation of Foreign Medical Schools", Federation of State Medical Boards Bulletin, March 1982.

Selected Testimony before the Congress of the United States

- Testimony on cost of HIV/AIDS Treatment in the United States. (Presented to US Senate Committee on Health, Education, Labor and Pensions Subcommittee on Primary Health and Aging, May 15, 2012)

- Testimony on Protesters in the District of Columbia (Presented to House Committee on Oversight and Government Reforms, Subcommittee on Health Care, District of Columbia, Census and National Archives. January 24, 2012)

- Testimony on H.R. 3014--Elimination of Health Disparities in Health Reforms. (Presented to the U.S. House Committee on Energy and Commerce, June 24, 2008)

- Testimony on Disparities in Health and Healthcare as Major Issues in Healthcare Reform (Presented to the Subcommittee on Health of the U.S. House Committee on Ways and Means, June 10, 2008)

- The Public Health Implications and Proposed Federal Response to the West Nile Virus Epidemic (Presented to the U.S. House Government Reform Committee, October 3, 2002)

- Statement on the Public Health Budget for FY 2003 Presented to the U.S. House Appropriation Subcommittee on Labor, Health, and Human Services and Education, May 2, 2002)

Selected Testimony before the Congress of the United States (continued)

- Statement on support of the Federal Government's Youth Media Campaign against Obesity (Presented to the U.S. House Appropriation Subcommittee on Labor, Health, and Human Services and Education, April 30, 2002)

- Comments on Risk Communication on Public Health Issues Related to National Security (Presented to the Subcommittee on National Security, Veterans Affairs and International Relations of the U.S. House Committee on Government Reform, November 29, 2001)

- Statement on the Need for Federal Investment in Public Health Preparedness to Effectively Combat Terrorist Attacks (Presented to the U.S. Senate Committee on Health, Education, Labor, and Pensions, October 9, 2001)

- Statement on Autism: Present Challenges and Future Needs. Why is the Incidence of Autism Increasing? (Presented to the U.S. House Government Reform Committee, April 6, 2000)

- Comments on the Proposed Public Health Budget for FY 2001 (Presented to the U.S. House Appropriations Subcommittee on Labor, Health, and Human Services and Education, March 7, 2000)

- Comments on the Proposed Public Health Budget for FY 2000 (Presented to The U.S. House Appropriations Subcommittee for Labor, Health, and Human Services and Education, April 29, 1999)

- Statement on the U.S. Food Safety System for Imports (Presented to the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs of the U.S. Senate, September 25, 1999)

Monica Brooks Bio

Monica Richardson Brooks is an environmental and social activist on the Eastern Shore of Maryland who organizes against the expansion of mega-poultry complexes. She is a community leader fighting for rights of clean air, water and equal justice for her community. In *response to the threat against her community,* Monica helped to co-found the citizens group Concerned Citizens Against Industrial CAFOs, which recently stopped the siting of what would have been the largest-ever poultry complex in Maryland. Monica's commitment is not only to the citizens in her region but throughout the state . She was appointed commissioner for the Maryland state Commission on Environmental justice and Sustainable Communities . She is a member of several coalitions united in efforts to ensure equitable rights for the rural citizens in her community. Monica serves proudly on the Boards of Assateague Coastal Trust and Socially Responsible Agricultural Project. On a personal note, she is a wife, mom, business owner and Spanish teacher. Monica is passionate about empowering and educating her children and the community about the importance of civic engagement.

Michael Payan

Ex. 6 Personal Privacy (PP)

EDUCATION

University of Delaware Newark, DE *Bachelor of Science, Marketing* and *Management* graduated Dec 2021 GPA: 3.7/4.0
Dean's List: Fall 2019, Spring 2020, Fall 2020, Spring 2021, Summer 2021

University of Delaware Georgetown, DE *Associate in Arts* May, 2019 GPA: 3.7/4.0
Dean's List: Fall 2017, Spring 2018, Fall 2018, Spring 2019

RELEVANT COURSEWORK

Accounting, Microeconomics, Macroeconomics, Marketing, Oral Communication in Business, Statistics, Data Analysis, Operations Management, Organizational Behavior, Small Business Management, International Marketing, Marketing Strategy for the Firm, Digital Marketing, Teams and Leadership, Well-Rounded Perspective from Associate in Arts Courses.

WORK EXPERIENCE

Namati US EJ Team *Digital Organizing and Communications* January 2022 - Present

- ❖ Worked with community members to support communications efforts including building collateral and teaching communication skills to community leaders.
- ❖ Utilized networking skills to expand the digital footprint base resulting in increased web traffic for the organization.
- ❖ Orchestrated substantial growth in followers and reach on social media networks through organic growth methods as well as hyper targeted advertisements to disseminate messaging to specific communities impacted by pollution..

Payan LLC Digital Marketing Solutions Delaware Based *Independent Owner* January 2019 - Present

- ❖ Worked 1-on-1 with clients to ensure a positive customer service experience and ensure a high level of conformance with customer expectations.
- ❖ Utilized networking skills to expand the client membership base resulting in thousands of dollars in additional revenue.
- ❖ Orchestrated substantial growth in followers and reach on social media networks through organic growth methods as well as hyper targeted advertisements.
- ❖ Directed subordinates in completing projects utilizing key interpersonal management skills
- ❖ Worked fluently with a wide range of software and technology for web design, video production, and digital marketing.
- ❖ Amplified messages of community organizations and nonprofits utilizing digital marketing techniques such as social media marketing, email marketing, podcasts, videos, and online forums.
- ❖ Produced engaging live streaming events.
- ❖ Created and maintained client websites.

Sussex Health & Environmental Network Sussex County, DE *Co-Founder* 2018 - Present

- ❖ Organize community events, advocate for and speak out about important community issues regarding environmental justice and environmental protection.
- ❖ Stay involved in local zoning and political events to ensure citizen health and environmental health is given proper weight in decision making processes.

Socially Responsible Agricultural Project Golden, CO *Regional Consultant* 2017 - 2019

- ❖ Advocate for the environmental well-being of the local community in agricultural and industrial practices. Organized communities with strategic progress-driven plans.
- ❖ Developed and implemented strategies for social media and mass email marketing campaigns resulting in

substantial growth to email lists and page following.

- ❖ Organized numerous community events including fundraisers, meetings and educational events with a regular attendance of about 50 members.
- ❖ Created numerous websites and implemented successful ways to increase web traffic and track data analytics.

ACTIVITIES

Sussex County Democratic Party Executive Committee Sussex County, DE *1st Vice Chair* March 2021 - Present

- ❖ Supported chair in running meetings, reaching the local youth, and engaging the community in the political process.
- ❖ Launched hyper-targeted campaigns to locate potential candidates for specific positions.

Independent Student Organization - "Crypto Thinktank" Georgetown, DE *President/ Director* October 2017 - May 2018

- ❖ Organized meetings entirely including agenda and locations.
- ❖ Planned and executed numerous interstate networking opportunities where members were brought to numerous locations in the region to learn more from field experts.

CAMPUS & VOLUNTEER INVOLVEMENT

Climate Change Rally Speaker, Kells Park, Newark DE October 2021

- ❖ Spoke alongside Senator Stephanie Hansen, Rep. Larry Lambert, and NAACP Exec Committee Member, LaVaida Owen White and others on the importance of addressing climate change.

Dem-a-thon Online Fundraiser Studio Manager May 2021

- ❖ Solely coordinated live performers, technology, speakers with back-end production staff to create a smooth live streaming experience using live communications and adapting real time.

Colloquium Panelist, University of Delaware, Georgetown Campus April 2018

- ❖ Gave colloquium on "Blockchain Technology and Cryptocurrency" to a crowd of approximately 50 students.

SKILLS

- ❖ Proficient in Microsoft Office Word, Excel, Powerpoint and all mirroring Google programs - docs, slides, etc.
- ❖ Basic Spanish
- ❖ Canva and Adobe
- ❖ Web Design
- ❖ Video Production: Final Cut Pro
- ❖ Blogging
- ❖ Social Media Marketing
- ❖ Email Marketing
- ❖ Public Speaking
- ❖ Project Management Software: Slack, Microsoft Teams
- ❖ G-suite
- ❖ Data Analytics for Web Traffic and Social Media
- ❖ Live-streaming
- ❖ Podcast
- ❖ Marketing Strategy
- ❖ Business Strategy

Maria Payan

Consultant

PERSONAL SUMMARY

I am a responsible and energetic consultant who relishes challenges with a proven track record and drive to see projects through completion. I am a self-driven professional with years of field experience and site investigations that has the ability to work well in a team environment. I have the organizational skills and ability to manage large projects. I have excellent communication skills to produce clear results for communities within a range of organizations and regulatory agencies. I have empowered and trained many communities in air and water sampling with specialized training in reporting and analyzation of data.

AREAS OF EXPERTISE

Community empowerment

Site investigations

Data analysis

Youth education

Team building

Research collection

Media communications

WORK EXPERIENCE

Socially Responsible Agricultural Project
Consultant Oct 2010 - Present

Responsible for client intake, analysis and community organizing. Responsible for researching regulatory policy and providing environmental and health publications. Creating a winning strategy. Achieving positive resolutions of issues for affected population including sustainable practices.

Peach Bottom Concerned Citizens Group
Founding Member and Executive Director April 2006-Oct 2010

Responsible for strategizing and organizing, campaigns. Responsible for outreach to local environmental non-profits and health researchers. Responsible for researching regulations and creating media campaigns, fundraising and grant writing. Managing projects through completion with positive results.

PROFESSIONAL

9 years experience in community empowerment

Specialized training in water and air monitoring

KEY SKILLS AND COMPETENCIES

- Strong written and verbal communication skills.
- Ability to facilitate community campaigns.
- Extensive knowledge of data gathering and research publications.
- Able to work independently, under own initiative and under pressure.
- Good communication skills and the ability to interface with staff and clients.

PERSONAL SKILLS

Result oriented

Organized and efficient

Self motivated

ACHIEVEMENTS AND PRESENTATIONS

University of Pennsylvania Law School Feb 2014
Acting Locally, Thinking Globally
University of Maryland College Park Dec 2014-Dec 2021
Annual Symposiums on Environmental Justice and Health Disparities
Indian River Senior Centre -DE July 2015
Release of Rapid Health Impact Assessment
Codorus Township –York PA Aug 2015
Passage of First Pennsylvania Health Permit for CAFOs
SRAP Live Dec 2020
Organized six-day online summit
SRAP Live Dec 2021
Panel Participant

PERSONAL DETAILS

Ex. 6 Personal Privacy (PP)

REFERENCES

Ms. Sherri Dugger
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Maryland Institute for Applied Env Health
College Park MD 20742
301 405 3136
swilson2@umd.edu

SACOBY MIGUEL WILSON, PhD, MS

Ex. 6 Personal Privacy (PP)

EDUCATION

2005 **University of North Carolina, School of Public Health**, Chapel Hill, NC
Doctor of Philosophy in Environmental Health Sciences
USEPA STAR Fellowship (2000-2003)
NIEHS Minority Supplement (2003-2005)
Advisors: Dr. Mark Sobsey, PhD and Louise Ball, PhD

2000 **University of North Carolina, School of Public Health**, Chapel Hill, NC
Master of Science in Environmental Health Sciences
USEPA STAR Fellowship (1998-2000)
Advisor: Dr. Mark Sobsey, PhD

1998 **Alabama Agricultural & Mechanical University,** Normal, AL
Bachelor of Science in Biology/Ecotoxicology (minor: Environmental Science)
AAMU Honors Award; (Graduated magna cum laude)

PROFESSIONAL EXPERIENCE

2017-Present **Associate Professor (promoted with tenure in May 2017)**
Maryland Institute for Applied Environmental Health
School of Public Health, University of Maryland, College Park, MD

2011-Present **Director,** Community Engagement, Environmental Justice and Health (CEEJH),
Maryland Institute for Applied Environmental Health, University of Maryland, College Park, DMD

2011-2017 **Assistant Professor**
Maryland Institute for Applied Environmental Health
School of Public Health, University of Maryland, College Park, MD

2011-2017 **Assistant Professor**
Department of Epidemiology and Biostatistics
School of Public Health, University of Maryland, College Park, MD

2007-2011 **Research Assistant Professor**
University of South Carolina
Institute for Families in Society with Appointments in the College of Social Work and Department of Epidemiology and Biostatistics
Columbia, SC

AWARDS, FELLOWSHIPS, AND OTHER RECOGNITION (SELECT)

2008 North Carolina Environmental Justice Network **Steve Wing International Environmental Justice Award** Sponsored by the North Carolina Environmental Justice Network

2008 EPA Environmental Justice Achievement Award given to the West End Revitalization Association, Mebane, NC, member of WERA's project management team

2015 **APHA Environment Section Damu Smith Environmental Justice Award**

2012-2013 The Muriel R. Sloan Communitarian Award, School of Public Health, UMD-College Park

2014-2015 The George F. Kramer Practitioner of the Year Award, School of Public Health, University of Maryland-College Park

2016 UMD Council on the Environment Junior Faculty of the Year Award

2018 Audubon Naturalists Society Taking Nature Black Environmental Champion

2019-2020 The Muriel R. Sloan Communitarian Award, School of Public Health, UMD-College Park

BOARDS, LEADERSHIP POSITIONS, AND OTHER SERVICE (SELECT)

2021-Present **Member**, ASPPH Climate Change and Health Task Force
2021-Present **Member**, Fifth National Climate Assessment, Air Quality Team
2021-Present **Member**, Science Advisory Board, US Environmental Protection Agency
2021-Present **Member**, Advisory Board, Aclima
2020-Present Editor-in-Chief, *Environmental Justice*
2020-Present **Member**, Board, Citizen Science Association
2020-Present **Member,** NAS Board on Environmental Studies and Toxicology (BEST)
2019-Present **Member**, Climate Equity Advisory Board, Kresge Foundation
2017-2021 **Member**, National Environmental Justice Advisory Council (NEJAC)
2021-Present **Member and Co-Chair**, NEJAC Air Quality and Community Monitoring Workgroup
2021-Present **Member and Co-Chair**, NEJAC Financial Matters and Justice40 Workgroup
2017-Present **Member**, External Advisory Board, Gulf Coast HBCU-CBO Health Equity Consortium
2010-2018 **Board Member**, Community-Campus Partnerships for Health (CCPH)
2011-2014 **Member**, CDC/NCEH Scientific Board of Counselors (2011-2014)

PUBLICATIONS (SELECT)(~90 publications, 2233 Citations, h-index=25)

1. Cooper CB, Larson LR, Parrish JK, Bowser G Cavalier D, Dunn RR, Haklay M, Hawn C, Gupta KK, Jelks NO, Johnson VA, Katti M, Leggett Z, Wilson OR, **Wilson SM**. (2021). Inclusion in citizen science: The conundrum of rebranding. *Science.*
2. Hendricks M, Meyer M, **Wilson SM** (2021). Moving up the ladder is rising waters: community science as a pathway toward community control and flood resilience. *Citizen Science: Theory and Practice* (Accepted).
3. Shao Y, Kavi L, Boyle M, Louis LM, Pool W, Thomas SB, **Wilson SM**, Rule AM, Quiros-Alcala L. (2021). Real-time air monitoring of occupational exposures to particulate matter among hairdressers in Maryland: A pilot study. *Indoor Air.*
4. Ezeugoh RI, Puett R, Payne-Sturges D, Cruz-Cano R, **Wilson SM**. (2020). Air quality assessment of particulate matter near a concrete block plant and traffic in Bladensburg, Maryland. *Environmental Justice* 13(3) (2020): 75-85.
5. Northcross AL, Hsieh S, **Wilson SM**, Roper E, Dickerson RR, Norouzi P, Morris V. (2020). Monitoring neighborhood concentrations of $pm_{2.5}$ and black carbon: when using citywide averages underestimates impacts in a community with environmental justice issues. *Environmental Justice 13*(2), 27-35.
6. Driver A, Mehdizadeh C, Bara-Garcia S, Bodenreider C, Lewis J, **Wilson SM**. (2019). Utilization of the Maryland Environmental Justice Screening Tool: A Bladensburg, Maryland Case Study. *International journal of environmental research and public health*, *16*(3), 348.
7. Jordan RC, Sorensen AE, Biehler D, **Wilson SM**, LaDeau S. (2019). Citizen science and civic ecology: merging paths to stewardship. *Journal of Environmental Studies and Sciences*, *9*(1), 133-143.
8. Burwell-Naney K, **Wilson SM**, Tarver SL, Svendsen E, Jiang C, Ogunsakin OA, Zhang H, Campbell D, Fraser-Rahim H. Baseline Air Quality Assessment of Goods Movement Activities before the Port of Charleston Expansion: A Community–University Collaborative. *Environmental Justice* 10(1): 1-10 (2017).
9. **Wilson SM**, Campbell D, Burwell K, Rice L, Williams E. Assessment and Impact of a Summer Environmental Justice and Health Enrichment Program: A Model for Pipeline Development, *Environmental Justice* 5(6):279-286 (2012a).
10. **Wilson SM**, Cooper J, Heaney CD, Wilson OR[$]. Built Environment Issues in Unserved and Underserved African-American Neighborhoods in North Carolina. *Environmental Justice* 1(2): 63-72 (2008b).

Additional bio. Information fro Dr. Wilson/ CEEJH

In 2017, CEEJH conducted PM monitoring using Airbeams (Habitatmap) at eight locations in Langley Park, a primarily Latinx unincorporated community. In 2018, the team measured PM2.5 using Airbeams and volatile organic compounds (VOCs) using Atmotubes (NotAnotherOne Inc©) at five locations in Bladensburg, primarily Black and Latino, near a concrete plant and roadways with heavy commuter and industrial traffic. This information was used to block a special exception for the plant. Purple Air monitors are also deployed county-wide at high schools throughout Prince George's County, a denser network growing in Cheverly, and an emerging hyperlocal network in the South Ward of Newark, New Jersey and Uniontown, Alabama. Additionally, PI Wilson and CEEJH currently work with Harambee House, providing technical assistance, outreach, and consultation to establish a hyperlocal air quality monitoring network in Savannah, GA.

CEEJH builds coalitions and partnerships to advocate for environmental and climate justice in the Mid-Atlantic region. CEEJH collaborates with the UMD School of Public Health and the student organization 17 for Peace and Justice. CEEJH aims to serve as a link between overburdened communities, community-based organizations, environmental advocacy groups, health professionals, researchers, policymakers, and government agencies in identifying and addressing environmental justice and health issues in the Mid-Atlantic region and beyond. Dr. Wilson's previous research in the region has utilized the CBPR framework and community science principles. As a result, the team has ongoing positive relationships with numerous CBOs in the study area.

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Aclima Team Highlights
2022 Selected Bios

Multi-disciplinary talent
Executive Leadership
Hardware and Sensor Engineering
Field Operations + Manufacturing
Atmospheric and Exposure Sciences
EJ + Strategic Communications
Community Engagement
Data Science + Biostatistics
Epidemiology + Env Health
Smart Growth + Policy
Software Engineering + UI/UX Design
Marketing

Diversity as core strength
Leadership: 50% women
50% BIPOC

Company: 34% women*
71% BIPOC*

**based on data from the end of 2021*

ACLIMA PROJECT TEAM

Davida Herzl, JD // Chief Executive Officer

Davida Herzl is co-founder and CEO of Aclima, where she leads a diverse team building a new class of tools to accelerate climate action, protect public health, and ensure equal access to clean air. Under Herzl's leadership, Aclima has pioneered block-by-block measurement and analysis of air pollution and greenhouse gasses at scales never before possible. The Aclima managed sensor network and software platform translates billions of scientific measurements into environmental intelligence that supports governments, communities, and companies working to reduce emissions for global impact. To advance Aclima's mission, Davida applies a systems-based approach to creating new technologies and powerful partnerships that deliver transformative business, environmental and societal value. The company was recently recognized as one of the 50 Most Innovative Companies in the World by Fast Company and #1 in Data Science. She holds a JD from the University of San Diego School of Law, and a BA in Economics, Political Science, and Communications from the University of California, San Diego. Davida has received industry accolades for her work, named one of the Top 100 Most Creative People in Business by FastCompany (2019), one of the 100 Most Intriguing Entrepreneurs of 2018 by Goldman Sachs, and a Grist 50 Fixer (2018).

Matt Hill // COO

As COO, Matt aligns and directs Aclima teams to ensure the highest standards of excellence in execution. Matt has over 20 years of experience in contract manufacturing and business operations. With a specialization in integrating root cause and data analysis into process design, implementation and improvement, Matt has had a long-history of success in operational turnaround, business system integration, manufacturing and risk management. Throughout his 9 years at Aclima, Matt has led several internal functional groups, including manufacturing operations, deployment operations and customer-facing teams. He is a long-time, committed member of the leadership team and a beacon for the company's values. Matt holds a BS in Chemical and Bioengineering from the University of California, Los Angeles.

Meghan Thurlow, Ph.D. // VP, Sensing and Applied Science

Dr. Meghan Thurlow is a Harvard-educated physical chemist with deep expertise in the development of novel instrumentation, and the application of transport models to better understand the atmosphere. Her doctoral research focused on the relationship between the chemical composition of the atmosphere and the climate. At Harvard, Meghan developed and deployed instrumentation to detect the trace gasses iodine monoxide and glyoxal in situ. At University of California, Berkeley, she worked to understand how inexpensive instrumentation can be used to monitor CO_2 levels at spatial resolutions relevant to greenhouse gas reductions at the city-scale. At Aclima, Meghan applies her deep expertise in sensing, signal processing, network analytics and modeling, across the company ensuring full-system integration to deliver the highest value data from our deployed networks. Meghan also has an MBA from the UC Berkeley Haas School of Business.

Melissa Lunden, Ph.D. // Chief Scientist

Dr. Melissa Lunden's extensive research career has focused on the transport and fate of pollutants in the environment. At Aclima, Melissa leads efforts to ensure the company's sampling and analysis methods deliver the highest levels of scientific rigor and validation, and leads research into the scientific questions Aclima's data can uniquely answer. She was a coauthor on the foundational 2017 ES&T mobile mapping paper that showed that air pollution can vary by 5-8x from one block to the next. Melissa has always been interested in the factors by which different environments influence exposure to highly dynamic pollutants. This variability underscores the need for ubiquitous hyperlocal environmental monitoring that she and the team at Aclima have pioneered. Prior to joining Aclima in 2013, Melissa was a staff scientist at Lawrence Berkeley National Laboratory, where she directed research on the formation, transport, and fate of atmospheric pollutants, including field work in Sierra Nevada forests, traffic tunnels, and the Boston and DC Subways. She received her PhD at the California Institute of Technology, with an emphasis on aerosol science.

Brian LaFranchi, Ph.D. // Technical Operations Manager

Dr. Brian LaFranchi leads the Science Operations group, which is responsible for sensor calibrations, deployed device performance, and overall quality control. After receiving his doctorate in Analytical Chemistry from the University of Vermont, where he was a U.S. EPA STAR Fellow, Brian embarked on a career in atmospheric chemistry research. As a post-doctorate, first at University of California Berkeley and then at Lawrence Livermore National Laboratory, his research touched on the impact of long-term declines in vehicle emissions on air quality over the Sierra Nevada Mountains of California and the use of radiocarbon isotope measurements as a tracer in carbon cycle studies on a regional scale. Prior to joining Aclima, Brian worked in the GHG Attribution Laboratory at Sandia National Labs, leading efforts to characterize uncertainties in high precision GHG measurements as part of field studies in Barrow, AK and Livermore, CA.

Joe Hicken // VP, Policy

Joe Hicken comes to Aclima with experience in federal and local government, previously supporting one of the executive co-founders of GSA's digital consultancy, 18F (now the Technology Transformation Service), and most recently implementing and configuring the revenue modules of the City and County of San Francisco's software system for budgeting and accounting. Joe spent nearly a decade in Washington DC, as a GS-14 Schedule C appointee in the Obama Administration and prior to that, as a democratic staff member of the House Armed Services Subcommittee on Military Personnel, working with lawmakers on statutes and policies associated with population health, mental health, and clinical care of the military's 9.6 million-person beneficiary population. Joe is now based out of Research Triangle Park, North Carolina. As Vice President of Policy, Joe works closely with current and future public-sector users to support use and application of Aclima's hyperlocal air quality baselines in their respective policy and regulatory contexts.

Josh Carr // VP, User Experience

As VP of User Experience and Head of Product, Josh Carr brings decades of experience in design and engineering to help Aclima and its partners find insights in large sets of data through analysis and visualization products. As a designer whose medium is code, he manages and leads a team integrating product managers, interaction designers and creative technologists to develop tools and interactive experiences that make the invisible visible. Previously working with leading interactive agencies The Barbarian Group and Organic, with clients such as General Electric, Samsung and Bloomberg, Josh has focused his career on helping products, brands and non-profit organizations leverage digital experiences to tell their stories.

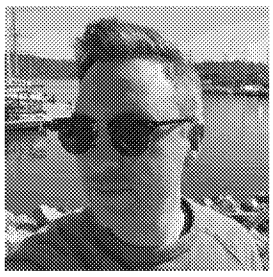
Jonathan Hendler // Head of Software

Jonathan has an extensive background in product development and engineering for technology startups, notably in the education and health industries. He co-founded BetterLesson in 2008 in Boston, where he was CTO for its first five years and through two rounds of funding. More recently, he was product engineering lead for San Francisco machine learning-based company ginger.io, developing products to support mental health. There he created two new product lines, and led data scientists, developers, lawyers, and a physician on a groundbreaking study. He joined Aclima as a senior backend engineer, advancing to head of software after his first year. His focus at Aclima has been to build new services, create frictionless internal tools, recruit high-performing software engineers, and manage all aspects of data engineering. Jonathan is passionate about bringing his experience to Aclima to support the mission. He holds a degree in computer science from Northeastern University.

Alex Tweedie, M.S. // Head of Technical Operations

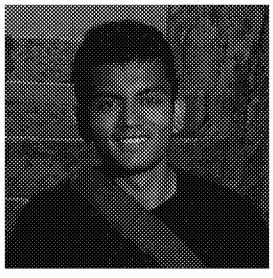
Alex leads Technical Operations, managing supply chain, hardware production, hardware deployment, fleet operations, and deployed hardware data quality assurance. Alex received her M.S. in Environmental Studies from the University of Colorado at Boulder, and upon completing her degree, Alex was selected as a Presidential Management Fellow and served in the Department of Energy, Office of Budget for two years. In her nearly 5 years at Aclima, Alex has worked in customer engagement, business operations, hardware production, and hardware deployment.

Mike Assenti // Sr. Product Manager



Mike is an experienced product leader and technologist who leads development of Aclima's regulatory air quality product, Aclima Pro. Mike's product work focuses on unlocking the power of complex systems by making them simple, accessible, and intuitive. Formerly of Dolby Labs, Mike led the development of Dolby On: the award-winning mobile app that helps musicians without access to a studio record high-quality music directly from their phones. With a background in B2B, B2C, and consulting, Mike joined Aclima after deciding to refocus his career on climate and social good.

Shreyan Sen, M.S. // Statistician



Shreyan is a Statistician at Aclima, primarily focused on uncertainty estimation and data product validation. He is passionate about making statistical reasoning simple, clear, and accessible to non-statisticians. Prior to joining Aclima, he worked as a Data Scientist at Orbital Insight, a geospatial analytics company. Shreyan received an M.S. in Statistics and an M.S. in Civil & Environmental Engineering from Stanford University, where he was an NSF Graduate Research Fellow, and a B.S. in Physics from Duke University. He also served as a Peace Corps Volunteer in the Republic of Guinea from 2012-2014.

Salvatore Mazzola // Head of Devices

Salvo has over 15 years of international experience designing innovative systems for technology startups. He leads Aclima's Devices team, which is responsible for designing and delivering physical assets to support or perform data collection, and for the embedded software components necessary to process, manage and transmit data to the backend. As an Electrical Engineer, Salvo designs Aclima's micro-electronics and power systems.

Caroline Parworth, Ph.D. // Sensor Technologist

Dr. Caroline Parworth is a Sensor Technologist in the Science Operations group at Aclima, which is responsible for management of Aclima's sensor networks, including calibration, monitoring of deployed device performance, and overall quality control. Caroline received her doctorate in Agricultural and Environmental Chemistry from the University of California, Davis, as a NSF Graduate Research Fellow. Her PhD focused on understanding atmospheric sources and chemical processes responsible for high levels of fine particulate matter in the heavily polluted region of the San Joaquin Valley of California. After finishing her PhD she was a post-doctorate at the NASA Ames Research Center, performing aircraft-based measurements of greenhouse gases for satellite validation as part of the Alpha Jet Atmospheric eXperiment (AJAX). After fulfilling her dream of flying in a fighter jet, she continued her career in air quality research at Aclima by combining her passion for atmospheric chemistry and measurement techniques.

Paul Solomon, Ph.D. // Sr. Scientist

Dr. Paul Solomon is a Senior Scientist at Aclima. Paul's areas of expertise and research interests include the development, evaluation, and application of analytical laboratory and particulate matter (PM) field measurement methods, with a focus coarse and fine PM as applied in a range of domestic and international research studies designed to characterize and quantify major, minor, and trace elements and species in air to elucidate source-receptor-exposure relationships and chemical and physical processes occurring in clean and polluted atmospheric environments. More recently, his interests include the development, evaluation, and deployment of micro air pollution monitors (air pollution sensors) with an emphasis on PM mass, methane, black carbon, and other PM and gaseous components in air. Paul also has a strong desire to ensure that research results are communicated to the scientific, public, and policy arenas through coordination and publication of scientific papers in conferences, and books. Paul has nearly 100 journal publications, about 140 presentations, holds 4 patents in air sampling methods with 5 patents pending and has also organized 26 special journal issues and organized and chaired four major international air quality conferences. Paul received his B.S. in Chemistry from the University of Maryland and his Ph.D. in Analytical Chemistry with a focus in air quality from the University of Arizona.

Nicole Goebel, Ph.D. // Data Scientist

Dr. Nicole Goebel is a Data Science team member at Aclima. Over the past 6 years Nicole has contributed to the collection, processing, analysis and delivery of both mobile outdoor and stationary indoor data collections; she utilizes both of these air quality data streams to optimize sampling efforts, improve sensor accuracy, and better understand spatial representativeness. Nicole received her B.S. in Biology from the University of Illinois, her Ph.D. in Oceanography at the University of Otago in New Zealand, and worked as a PostDoctoral Fellow at the University of Connecticut and University of California Santa Cruz. She was also a finalist in Wave Glider's PacX Ocean data challenge, where she analyzed oceanic drone-collected sensor data and satellite measurements to improve sampling and estimates of marine phytoplankton biomass across the Pacific Ocean.

Marek Kwasnica M.Eng.// Data Analyst

Marek is a data analyst with the Science Operations team, primarily working on methane and ethane quality control, calibration, and associated data products. Previously, he was a driver coordinator for Aclima's Brooklyn hub. Prior to Aclima, Marek was a research assistant for robotics-assisted physical therapy research at Kessler Foundation and worked as a cancer study coordinator with Montefiore Medical Center. He holds an M.Eng. for Biological Engineering from Cornell University.

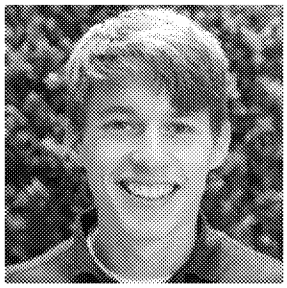
Cassandra Trickett, M.S., MPH // Data Analyst

Cassie joined the Science Operations team after driving for Aclima. Prior to joining, she worked at a small consulting firm that supports environmental litigation plaintiffs by providing air models and map exhibits. Some of this work involved several visits to the Porter Ranch community collecting odor observations and air and wipe samples. Cassie has a dual masters in Environmental Engineering and Environmental Health Science and is interested in environmental justice, mapping, and climate.

Nathan Sankary, Ph.D. // Data Scientist

Dr. Nathan Sankary is part of the data science team at Aclima; working on analyzing and optimizing data collection strategies, and autonomous methods to recognize and characterize irregular pollution signals in Aclima's air quality data streams. Nathan has a B.S. in Geology from Michigan Technological University, and a Ph.D. in Environmental Engineering from the Technion - Israel Institute of Technology, where his Ph.D. thesis was awarded for outstanding work in Environmental Engineering, Water Resources, Climatology, and Air Pollution.

Todd Langland, Ph.D // Data Scientist



Dr. Todd Langland splits his time between data science and software projects at Aclima. During his 6 years at the company, he has contributed to projects ranging from developing low-cost sensor calibration models to improving geolocation of data sampled on-road. These days, he helps productionize data science prototypes to add and improve features available in Aclima's data products. Todd received a Ph.D. in Oceanography from Louisiana State University, and a B.S. in Ecology, Behavior, and Evolution from the University of California, San Diego.

ACLIMA ADVISORS

(see here for expanded list)

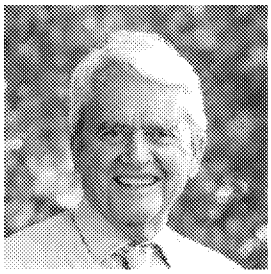
Peggy Shepard: Peggy Shepard is co-founder and executive director of WE ACT for Environmental Justice and has a long history of organizing and engaging Northern Manhattan residents in community-based planning and campaigns to address environmental protection and environmental health policy locally and nationally. She has successfully combined grassroots organizing, environmental advocacy, and environmental health community-based participatory research to become a national leader in advancing environmental policy and the perspective of environmental justice in urban communities—to ensure that the right to a clean, healthy and sustainable environment extends to all.

Dr. Sacoby Wilson: Dr. Sacoby Wilson is Associate Professor and Director, Community Engagement, Environmental Justice, and Health (CEEJH), University of Maryland. Dr. Wilson is an environmental health scientist and environmental justice advocate with the Maryland Institute for Applied Environmental Health and Department of Epidemiology and Biostatistics. He has expertise in exposure science, environmental justice, community-engaged research including community-based participatory research (CBPR), the built environment, geospatial visualization tools, environmental health disparities, air pollution and water quality studies, climate change, and community resiliency.

Gloria Walton: Gloria Walton is President and CEO of The Solutions Project. Gloria has been named one of the country's most exciting "next generation" political leaders. She leads The Solutions Project, which supports climate changemakers, innovators, and solutionaries at the grassroots. Previously, she was President & CEO of Strategic Concepts in Organizing and Policy Education (SCOPE), a South LA-based community organization widely recognized as a leader in the development of cutting-edge strategies to ensure that black and brown, poor and working-class communities have an equal voice in the democratic process.

Heather McTeer Toney: Heather McTeer Toney serves as the Climate Justice Liaison for the Environmental Defense Fund (EDF) and as Senior Advisor to Moms Clean Air Force. She was the first African-American, first female and the youngest to serve as Mayor of Greenville, Mississippi from 2004-2012. In 2014, she was appointed by President Barack Obama as Regional Administrator for the Environmental Protection Agency's Southeast Region. Known for her energetic and genuine commitment to people, her work has made her a national figure in the area of public service, environmental justice and community engagement.

Kerry Duggan: Kerry Duggan is Principal at SustainabiliD. Kerry is a connector and change agent. She currently serves on the State of Michigan's Council on Climate Solutions. In 2020, Kerry was a Biden appointee to the Biden-Sanders Unity Climate Change Task Force. She served in the Obama-Biden White House as Deputy Director for Policy to then Vice President Joe Biden for energy, environment, climate and distressed communities. Simultaneously, she served as Deputy Director of the Detroit Federal Working Group to support Detroit's revitalization.



William Reilly: Bill Reilly was Administrator of the U.S. Environmental Protection Agency from 1989 to 1993. He has enjoyed careers in public service, non-governmental organizations, and private sector finance. He has served four US Presidents: Presidents Nixon, George H.W. Bush, Clinton and Obama. For more than 20 years he was a Senior Advisor to TPG Capital, an international investment partnership. Before joining TPG, Mr. Reilly was the first Payne Visiting Professor at Stanford University.